



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

September 23, 1994

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

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 2 - DOCKET  
NO. 50-328 - FACILITY OPERATING LICENSE DPR-79 - LICENSEE EVENT REPORT  
(LER) 50-328/94006

The enclosed LER provides details concerning the closure of containment isolation valves and the actuation of an engineered safety feature resulting from an inadvertent loss of nonessential control air to Unit 2 containment.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv) as an event that resulted in the actuation of an engineered safety feature.

Sincerely,

O. J. Zeringue  
Acting Site Vice President

Enclosure  
cc: See page 2

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cc (Enclosure):

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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Sequoyah Nuclear Plant (SQN), Unit 2

DOCKET NUMBER (2) | PAGE (3)

050003 2 8 11 OF 0 5

TITLE (4)

Engineered Safety Feature Actuation Resulting From a Loss of Nonessential Air Supply

EVENT DAY (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
			SEQUENTIAL	REVISION				FACILITY NAMES											
MONTH	DAY	YEAR	NUMBER	NUMBER	MONTH	DAY	YEAR	DOCKET NUMBER(S)											
0	8	2	5	9	4	9	4	0	0	6	0	0	0	9	2	3	9	4	050003

OPERATING MODE (9) | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5:

(Che | ve or more of the following)(11)

POWER	LEVEL	(10)	0	0	0	20.402(b)	20.405(c)	XX	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
						20.405(a)(1)(iii)	XX	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

C. H. Whitmore, Compliance Licensing

TELEPHONE NUMBER

AREA CODE |

6 | 1 | 5 | 8 | 4 | 3 | - | 7 | 2 | 1 | 0

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 | MONTH | DAY | YEAR

SUBMISSION |

DATE (15) |

YES (If yes, complete EXPECTED SUBMISSION DATE) | X | NO

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

On August 25, 1994, at 1711 Eastern daylight time, with Unit 2 in Mode 6 and defueled, the nonessential control air header to containment was inadvertently isolated, causing an engineered safety feature actuation. The event occurred during the performance of the restoration portion of a preventive maintenance activity. Operations personnel were realigning the system valves to their normal position. However, the sequence in which this was conducted isolated the nonessential control air header. Operations personnel quickly determined the cause of the event and restored the system air pressure. The root cause of this event was personnel error in that the unit operator did not follow procedures. An information letter has been developed for distribution to Operations personnel with lessons-learned and information concerning the correct process for performing briefings before and during the performance of activities.

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TEXT CONTINUATION

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		YEAR		NUMBER		REVISION					
Sequoyah Nuclear Plant (SQN), Unit 2	050003128	94	--	006	--	00	02	OF	05		

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

## I. PLANT CONDITIONS

Unit 2 was in Mode 6 and was defueled during this event.

## II. DESCRIPTION OF EVENT

A. Event

On August 25, 1994, at 1711 Eastern daylight time (EDT), the Unit 2 nonessential control air header (EIIS Code LF) to containment was inadvertently isolated. Several nonessential air-operated components, e.g., containment isolation valves (CIVs), that are required to operate or change position to ensure safe shutdown or to mitigate the consequences of an accident operated as designed, resulting in an engineered safety feature (ESF) actuation. The isolation of the nonessential control air header occurred during the restoration portion of the performance of a preventive maintenance (PM) activity. This PM was being used to calibrate the normal air supply valve in the control air header. To calibrate the normal supply valve, an air bypass line is opened around the valve to maintain control air to isolation valves and components in containment. After successfully calibrating the valve, the activity was turned over to Operations personnel for restoration of the system. During the restoration, Operations personnel were attempting to realign the system to its normal configuration when the air bypass line valve was erroneously closed before the normal air supply to the header was reestablished. This error resulted in several CIVs (EIIS Code JM) traveling closed and isolating several components in containment. Operations personnel quickly determined the cause of the event, dispatched an operator to open the valves, and restored the system air pressure.

B. Inoperable Structures, Components, or Systems that Contributed to the Event

None.

C. Dates and Approximate Times of Major Occurrences

August 25, 1994  
at 1500 EDT

The Unit 2 unit operator (UO) discussed the "in progress" PM work packages as part of the shift turnover. The evening shift was expected to perform the restoration of the system portion of the PM.

August 25, 1994  
at 1620 EDT

The Unit 2 UO performed a briefing in the control room with the assistant unit operator (AUO) was to perform the manipulation of the valves to restore the system to its normal configuration. The importance of the proper sequencing of valve manipulation was discussed.

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August 25, 1994  
at 1645 EDT

Restoration of the system was started, i.e., an AUO was dispatched to begin the manipulation of valves to realign the system to its normal configuration.

August 25, 1994  
at 1650 EDT

An AUO that was not in the briefing for restoration of the system contacted the UO and reported that he was available for additional work. The UO and AUO discussed the restoration of the nonessential control air system. However, the UO did not discuss the sequence involving the opening of a normal air supply valve. Also, the UO did not discuss the consequences of incorrectly manipulating the valves.

August 25, 1994  
at 1711 EDT

Nonessential air was lost to Unit 2 containment. An AUO was dispatched to open the FCV that would restore the system.

August 25, 1994  
at 1722 EDT

Nonessential air was restored to Unit 2 containment, and the effected equipment was placed back in service.

D. Other Systems or Secondary Functions Affected

The air-operated CIVs for the upper and lower containment radiation monitors and various valves on the glycol portion of the ice condenser system traveled closed as a result of the loss of air.

E. Method of Discovery

The condition was annunciated on the main control room panels.

Operator Actions

The main control room operators immediately entered the appropriate abnormal operating instruction, determined that the condition was associated with the nonessential air header normal air supply valve calibration PM, and took the appropriate steps to restore the nonessential control air system.

G. Safety System Response

The CIVs closed as designed.

III. CAUSE OF EVENT

A. Immediate Cause

The immediate cause of this event was the loss of nonessential control air to containment isolation components.

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

B. Root Cause

The root cause of this event is personnel error in that the UO did not follow procedure. The UO failed to direct the AUO in the proper sequence of manipulating the valves and also, the UO did not follow procedure by conducting a pretest briefing with all personnel utilized in the activity.

IV. ANALYSIS OF EVENT

The operability of safety-related components required for safe shutdown and accident mitigation was not affected by this event. The automatic isolation of the control air system performed as required, and the nonessential air-supplied components failed as designed on a loss of control air to their safety-related position. Unit 2 was in Mode 6 with the reactor defueled. Therefore, this event did not adversely affect the health or safety of plant personnel or the general public.

V. CORRECTIVE ACTION

A. Immediate Corrective Action

Operators evaluated the condition and returned the appropriate valves to their normal positions, restoring the system air pressure.

B. Corrective Action to Prevent Recurrence

The appropriate personnel actions will be developed for the individuals involved with this incident.

An information letter has been developed for distribution to Operations personnel summarizing the following: (1) summarize the incident, (2) remind personnel to ensure close "attention to detail" when performing procedure steps, (3) emphasize discussion of the "objective" when performing evolutions with personnel actually performing tasks, (4) ensure that all personnel involved with an evolution be present during briefing sessions or conduct separate briefings as necessary to relay pertinent information, and (5) direct operators that when additional personnel become part of an evolution after the initial briefing, they must ensure that key elements from the initial briefing are understood by the additional personnel.

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