

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry - Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 9 6 1 OF 0 2	PAGE (3) 1 OF 0 2
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TITLE (4)  
Secondary Containment Isolation of Unit 3 Reactor Zone and Refuel Floor

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 1	2 5	8 4	8 4	0 0 2	0 0 0	2 1	6 8	4			0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)										
POWER LEVEL (10) 0 1 0 1 0	20.402(b)	20.406(a)	X	50.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	50.36(a)(1)		50.73(a)(2)(v)	73.71(c)						
	20.406(a)(1)(ii)	50.36(a)(2)		50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)						
	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)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME David L. Smith	TELEPHONE NUMBER 2 0 1 5 7 1 2 1 9 1 - 1 0 1 8 1 6 1 5
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	JIM	0101914	G101810	Y					
X	JIM	0101012	A131418	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

During the unit 3 refueling outage, the reactor operator received secondary containment isolation alarms for reactor zone ventilation and refueling floor ventilation and group 6 isolation valve closure. After verification checks to assure all associated parameters were below setpoints, the operator attempted to reset the alarms. This did not clear the alarms. Maintenance was dispatched for troubleshooting. The ensuing investigation revealed the division I logic of secondary containment isolation had initiated and all components responded properly. The initiation was caused by a primary logic relay failing in the conservative direction. The division II logic also started to initiate off a pressure differential seen because of the division I's isolating the refueling zone ventilation. However, a primary logic relay failed in the nonconservative direction terminating division II initiation. This occurrence was of no consequence since division I fulfilled the requirement of secondary containment isolation and the relay failure was a random failure. Relays were replaced, satisfactorily tested and both division logics returned to standby readiness condition. No recurrence control is required.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

While Unit 1 was operating at 97 percent, unit 2 at 23 percent, and unit 3 in a refueling outage, the unit 3 operator (licensed reactor operator) observed secondary containment isolation alarms (ZA) for unit 3 reactor zone ventilation (VA) and for refueling floor zone ventilation (VA). The operator then verified associated parameters to be below isolation setpoints. After alarm reset failed to clear alarms, maintenance personnel were contacted to troubleshoot. [In addition to the zone isolations, all of primary containment group 6 isolation valves (ISV) were initiated. This was of no concern to the unit operator since the unit was in refueling status with no fuel in the reactor vessel (RPV).]

It was found that division I relay 16AK37 (RLY) actuated (due to internal coil (CL) failure) causing unit 3 reactor zone ventilation and refueling zone ventilation isolations. [Secondary Containment Isolation System (JM) is divided into division I (inboard valves) (ISV) and division II (outboard valves) (ISV); supply and exhaust fans (FAN) can be isolated by either division I or II logic.] Then, the ensuing refueling floor pressure transient apparently caused relay R2B (division II) (RLY) to actuate. Its actuation is to initiate refueling zone ventilation isolation. However, refueling zone isolation had already been effected by the relay 16AK37 actuation. (16AK37's logic is to cause its related reactor ventilation zone, primary containment group 6 isolation valves and refueling zone ventilation to isolate.)

Upon resetting affected division I and II relays to align the secondary containment isolation to its standby readiness condition, it was discovered that division II secondary containment isolation logic (refueling zone ventilation portion) had not completely initiated. (This being of no consequence since division I operated as required.) In the investigation, relay R3B was found inoperable. This relay was necessary to actuate all required division II (refueling zone ventilation) valves and associated supply and exhaust fans. From initial event until relay replacement was 14 hours.

Both relay failures were found to be random failures. They were replaced and appropriate functional tests proved relays and logic to be functioning properly. There is no future recurrence control required.

Responsible Plant Section

N/A

Previous Occurrences

None

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

Browns Ferry Nuclear Plant

P. O. Box 2000

Decatur, Alabama 35602

February 16, 1984

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 3 - DOCKET  
NO. 50-296 - FACILITY OPERATING LICENSE DPR-68 - REPORTABLE OCCURRENCE  
REPORT BFRO-50-296/84002

The enclosed report provides details concerning secondary containment  
isolation of Unit 3 reactor zone and refuel floor. This report is  
submitted in accordance with 10 CFR 50.73 (a)(2)(iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*J. R. Pitt*

*for*  
G. T. Jones  
Power Plant Superintendent  
Browns Ferry Nuclear Plant

LC:DLS:SSH

Enclosure

cc (Enclosure):

Regional Administrator  
U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region II  
101 Marietta Street, Suite 2900  
Atlanta, GA 30303

NRC Inspector, Browns Ferry Nuclear Plant

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