

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry - Unit 3 DOCKET NUMBER (2) 0 5 0 0 0 2 1 9 6 PAGE (3) 1 CF 0 1 2

TITLE (4) Personnel Error in Voltage Measurement Results in Inadvertent Containment Isolation

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	3	8	6	8	6	0	0	3	0	0	0	2	1	8	6	Browns Ferry - Unit 1	0	5	0	0	0	2	1	9		
																		Browns Ferry - Unit 2	0	5	0	0	0	2	1	6	1	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9) N	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 01010	20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(e)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: Richard C. Steele, Compliance Engineer TELEPHONE NUMBER: 2 0 5 7 2 9 - 3 7 8 7

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

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

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On January 23, 1986, at 0855 CST, unit 3 instrument mechanics were taking voltage measurements during reactor building ventilation radiation monitor calibration surveillance instruction (SI 4.2.A-10) when the voltmeter lead slipped and momentarily shorted the power supply to ground. This tripped the radiation monitors which caused a partial primary containment isolation, refuel zone isolation, train B and C standby gas treatment initiation, and train B control room emergency ventilation initiation. Standby gas treatment train A, control room emergency ventilation train A, and unit 3 reactor zone isolation did not initiate as expected. It is believed that the momentary ground was not of sufficient duration to allow the system logic to go to completion.

The operators returned the isolated systems to normal alignment. The instrument mechanics subsequently completed the SI. Corrective action will consist of a general rewrite of the SI as well as a critique of the event by instrument maintenance personnel. TVA is planning to perform a test to verify correct functioning of the logic for train A standby gas treatment, train A control room emergency ventilation, and unit 3 reactor zone isolation.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Browns Ferry - Unit 3	0 5 0 0 0 2 9 6	8 6	- 0 0 3	- 0 0 0	2	OF	0 2

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

Units 1 and 3 were in an extended maintenance outage, and unit 2 was in a refueling outage. Unit 3 and common ventilation systems were affected.

On January 23, 1986, at 0855 CST, unit 3 instrument mechanics were performing reactor building ventilation radiation monitor calibration surveillance instruction (SI 4.2.A-10) when, while checking the power supply voltage, the voltmeter alligator clip slipped and shorted a terminal momentarily to ground. This caused reactor zone exhaust channel "B," RM-90-141, and refuel zone exhaust channel "B," RM-90-143, to experience a momentary loss of voltage condition. This would trip relays K1 and K2 of RM-90-141 and RM-90-143, which in turn would trip relays in the isolation logic and emergency ventilation trip circuitry. However, only the following occurred:

1. Standby gas treatment (BH) initiation of train B and C
2. Control room emergency ventilation (VI) initiation of train B
3. Units 1, 2, and 3 refuel zone (VA) isolation
4. Group 6 (purging and venting) (JM) isolation

Standby gas treatment train A, control room emergency ventilation train A, and unit 3 reactor zone (VB) were expected to initiate but did not. It is believed that the momentary ground was not of sufficient duration to fully activate the isolation logic.

After verifying that no abnormal conditions existed, the operators returned the listed isolated systems into normal alignment. The instrument mechanics subsequently completed the SI normally.

Personnel error in hookup of test instruments caused the isolations. The testpoint wires are No. 28 AWG to No. 32 AWG with other wires in vicinity of test points approximately 1/16 inch to 1/8 inch apart. The alligator clip could easily short to other wires on the power supply under test. Use of different type of leads (pin type or clip type) on the voltmeter would have been more suitable for measurements under these conditions. This SI is also lengthy and cumbersome in execution.

A critique of the reactor building vent monitoring system was prepared by the instrument maintenance supervisor, which discussed this event and other problems in performing this SI during the 1985 calendar year. The instrument mechanics will be required to review the critique as constructive criticism for recurrence control. TVA is planning to perform a special test to verify correct functioning of the logic for train A standby gas treatment initiation, train A control room emergency ventilation initiation, and unit 3 reactor zone isolation. A general rewrite of the SI has also been initiated to clarify the instruction.

Responsible Plant Section - IM

Previous Events - BFRO-50-296/85019

TENNESSEE VALLEY AUTHORITY

Browns Ferry Nuclear Plant

P.O. Box 2000

Decatur, Alabama 35602

February 21, 1986

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-50-296/86003

The enclosed report provides details concerning a personnel error in
voltage measurement which resulted in inadvertent containment
isolation. This report is submitted in accordance to 10 CFR 50.73
(a)(2)(iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

Robert L. Lewis
Robert L. Lewis
Plant Manager
Browns Ferry Nuclear Plant

Enclosures

cc (Enclosures):

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NRC Resident Inspector, Browns Ferry Nuclear Plant

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