NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
Spurious Actuation of Reactor Protection System Circuit Protector Causes ESF Actuation

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)
										Browns Ferry Unit 2	0 5 0 0 0 2 6 0
0 8	0 7	8 7	8 7	—	0 1 8	— 0 0	0 9	0 4	8 7	Browns Ferry Unit 3	0 5 0 0 0 2 9 6

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0 0	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 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Stephen B. Jones, Engineer, Plant Operations Review Staff	2 0 5 7 2 9 - 3 7 8 8

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 SUBMISSION DATE (15)	MONTH	DAY	YEAR
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 7, 1987, at 1745, the unit 1 reactor protection system circuit protector 1A1 spuriously opened. This caused an unplanned actuation of the standby gas treatment and the control room emergency ventilation systems, isolation of the common refueling zone, isolation of the unit 1 reactor zone, a unit 1 half scram, and an isolation of the primary containment purge and ventilation system. The circuit protector was reset and all systems were returned to normal operation or standby readiness by 1755. Investigation, troubleshooting, and recalibration did not reveal a cause for the circuit protector trip. Further corrective action is not planned.

IE22
1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 1	0 5 0 0 0 2 5 9	8 7	0 1 8	0 0	0 2 OF 0 2

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

Units 1, 2, and 3 were in refueling outages. Unit 1 and common ventilation systems were affected.

On August 7, 1987, at 1745, the power to the reactor protection system (RPS) (IEEE identifier EK) bus A was interrupted when circuit protector 1A1 opened. This caused the following actuations:

1. Unit 1 RPS half scram channel A (EK)

2. Unit 1 Group 6 isolation (purging and venting) (VB)

3. Unit 1 Reactor Building Ventilation Isolation (VA)

4. Refueling Zone Ventilation Isolation (VG)

5. Standby Gas Treatment trains A, B, and C Initiation (BH)

6. Control Room Emergency Ventilation train A and B initiation (VI)

The other primary containment group isolations that normally occur on a half scram signal were already isolated and the systems out of service. The 1A1 circuit protector was reset and the affected systems were returned to operation or standby readiness by 1755.

The RPS circuit protectors are located between the motor generator (MG) sets and the RPS bus. These circuit protectors monitor the MG set output for undervoltage, overvoltage, or underfrequency conditions. If any of these conditions are sensed, a contact opens and deenergizes the RPS bus.

The 1A1 circuit protector was inspected, and the calibration of the three relays was checked. No problems were identified. A review of operational events did not identify any condition that could have actuated the circuit protector. This event has been attributed to a spurious actuation of the circuit protector, and no further corrective action is planned.

The event did not affect the safe operation of the plant. After the circuit protector opened, all systems performed as designed and placed the plant in a conservative operating configuration. If this event had occurred during power operation the results would have been the same, and plant operation could have safely continued.

Previous Events - BFRO-50-259/86002

Commitments - None

TENNESSEE VALLEY AUTHORITY
Browns Ferry Nuclear Plant
P.O. Box 2000
Decatur, Alabama 35602

September 4, 1987

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT BFRO-50-259/87018

The enclosed report provides details concerning the unplanned engineering safety feature actuation caused by a spurious actuation of the reactor protection system circuit protector. This report is submitted in accordance with 10 CFR 50.73 (a)(2)(iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

John Walker

J. G. Walker
Plant Manager
Browns Ferry Nuclear Plant

Enclosures
cc (Enclosures):
Regional Administration
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Resident Inspector, Browns Ferry Nuclear Plant

IE22
1/1