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 2	0 5 0 0 0 2 6 0	1 OF 0 3

TITLE (4)

Engineering Safeguards Actuations During Surveillance Testing

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 1	0 5 0 0 0 2 5 9
0 4	0 3	8 6	8 6	–	0 0 5	–	0 0	0 5	0 2	8 6	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
David L. Smith, Compliance Engineer	2 0 5 7 2 9 - 3 8 6 5

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)

An inadvertent containment isolation occurred during performance of a unit 2 surveillance instruction (SI). The SI verifies the reactor building ventilation exhaust radiation monitor isolation logic inputs with resulting isolations and system actuations. As part of the logic verification test, a jumper is installed to prevent initiation of engineered safety features when an actuation signal is generated. While the actuation signal was present, the jumper came loose which caused the isolation to occur. During the event, the actuated systems operated as designed.

The reactor operators returned the actuated systems to normal standby readiness within 24 minutes of initiation. To prevent similar occurrences in the future, the procedure was revised as an interim measure. The revised procedure no longer requires the jumpering of the isolation logic relay contacts. The long-term recurrence control will be to install test connections such that jumpers will be installed at a test panel.

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

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

On April 3, 1986, at 1014, unit 2 instrument mechanics were performing Reactor Building Ventilation Radiation Monitor Calibration Surveillance Instruction (SI 4.2.A-10) on the channel 'B' detectors. The SI required a jumper to be placed across contacts of relay 16A-K61B to bypass an outboard isolation logic signal, which was to be generated in a subsequent step of the procedure. The instrument mechanics placed the jumper and deenergized relay 16A-K61B. The installed jumper came loose, lost continuity, and an inadvertent primary containment isolation occurred as follows:

a. Standby gas treatment (BH) train "B" and "C" initiated

b. Unit 1,2, and 3 refuel zone (VA) isolated

c. Unit 2 reactor zone (VB) isolated

d. Control room emergency ventilation train "B" (VI) initiated

e. Group 6 primary containment system (JM) isolation (purging and venting) occurred.

Because of the jumper disconnect, a secondary occurrence was that the jumper momentarily shorted to an adjacent terminal causing fuse 16A-F20, in panel 9-43, to blow. The isolation was initiated by the jumpers loss of continuity, not the blown fuse.

The instrument mechanics notified the reactor operator, who returned the activated safety systems, listed above, to normal standby readiness by 1038.

There are no safety concerns raised by the event since the affected unit was completely defueled. The safety system actuations were consistent with designed tripping functions of the relay involved.

Investigation of the occurrence revealed that the jumper was constructed utilizing alligator clips which could not be securely connected to the rounded screw head termination points. In addition, access to relay 16A-K61B is hampered by surrounding hardware. These conditions were the cause of the event.

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

As an interim measure to prevent further recurrences, the unit 2 SI was revised on April 9, 1986. The SI was changed so that the isolation function verification is verified before the logic verification. The reorganization of the procedure no longer requires jumper placement on the 16A-K61B relay contacts, and the expected isolation will not be reportable under 10 CFR 50.73 (a)(2)(iv).

The long-term recurrence control will be to install test connections such that required jumpers will be installed at a test panel.

Previous Similar Events - BFRO-50-296/86003, BFRO-50-259/86009

Responsible Section - N/A

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

May 2, 1986

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 2 - DOCKET NO. 50-260 - FACILITY OPERATING LICENSE DPR-52 - REPORTABLE OCCURRENCE REPORT BFRO-50-260/86005

The enclosed report provides details concerning engineering safeguards actuations during surveillance testing. This report is submitted in accordance to 10 CFR 50.73 (a)(2)(iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

for Robert L. Lewis
Plant Manager
Browns Ferry Nuclear Plant

Enclosures
cc (Enclosures):
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U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
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INPO Records Center
Suite 1500
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Atlanta, Georgia 30339

NRC Resident Inspector, Browns Ferry Nuclear Plant

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