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O. J. "Ike" Zeringue
Vice President, Browns Ferry Operations

JUN 08 1992

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

Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 1 - DOCKET NO. 50-259 - FACILITY
OPERATING LICENSE DPR-33 - LICENSEE EVENT REPORT LER-50-259/92002, REVISION 1

The enclosed report provides details concerning unplanned engineered safety
feature actuations resulting from an unexpected failure of the reactor
protection system circuit 1B motor generator.

TVA is revising this LER because of errors identified in the May 26, 1992
letter. In the previous letter, TVA inadvertently provided conflicting event
dates on pages 1 and 2 and indicated an incorrect LER sequential number on
pages 3, 4, and 5. Furthermore, editorial revisions were made throughout the
report as shown by revision bars.

Sincerely,

O. J. Zeringue

Enclosure

cc: see page 2

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U.S. Nuclear Regulatory Commission

JUN 08 1992

cc (Enclosure):

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry Nuclear Plant (BFN) Unit 1 DOCKET NUMBER (2) | PAGE (3) |
050002 | 5 | 910F05

TITLE (4) Unplanned Engineered Safety Features Actuation Because of an unexpected Reactor Protection System failure.

EVENT DAY (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)	
04	24	92	002	0		06	08	92	BFN Unit 2	050002160	
									BFN Unit 3	050002196	

OPERATING MODE (9) N THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following)(11)

20.402(b)	20.405(c)	X	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)	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	TELEPHONE NUMBER
James E. Wallace, Compliance Licensing Engineer	205729-7874

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) | X | NO | EXPECTED SUBMISSION DATE (15) | | | | |

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

On April 24, 1992, with Units 1 and 3 defueled and Unit 2 at 100 percent power, the Unit 1 reactor protection system experienced an unexpected failure, thereby causing the actuation of BFN's engineered safety features (ESF). This challenge to the ESFs is reportable in accordance with 10 CFR 50.73(a)(2)(iv).

The root cause for this event is an unexpected failure which could not be identified.

The immediate corrective actions included: 1) dispatching an Assistant Shift Operations Supervisor (ASOS) to the Unit 1 board room to investigate the event, 2) placing the Unit 1 RPS bus 1B on alternative power, and 3) returning the ESF systems to normal. As a precaution, the overvoltage relay was replaced and the voltage regulator was tested under load conditions. The long-term corrective action is to contact the vendor for identification of similar problems and to initiate corrective actions as required based on the vendor findings.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Browns Ferry Unit 1		1992	002	01	02	01	05

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

I. PLANT CONDITIONS

Unit 2 was at approximately 100 percent power (Power Operations). Units 1 and 3 were shutdown and defueled.

II. DESCRIPTION OF EVENT

A. Event:

On April 24, 1992, at 1842 hours, the Unit 1 control room unit operator (UO) (utility, licensed) received engineered safety feature (ESF) actuations when the Unit 1 Reactor Protection System (RPS) bus 1B deenergized. At that time, the Shift Operations Supervisor (SOS) (utility, licensed) told the UO not to reset the alarms until a cause for the event could be determined. The SOS dispatched an Assistant Shift Operations Supervisor (ASOS) (utility, licensed) to the Unit 1 Battery Board room to investigate the cause of the event. From a preliminary investigation they found that the circuit protectors were open. After the preliminary investigation, the ASOS called a System Engineer (SE) to perform a more in-depth investigation. Investigations showed the overvoltage relay had energized and sealed in. TVA concluded that a generator field overvoltage trip had occurred.

The tripping of the circuit protector resulted in a partial Group 6 primary containment isolation system (PCIS) actuation [JM]; reactor and refuel zone ventilation [V4] isolated on Units 1, 2, and 3; standby gas treatment (SGTS) [BH] initiated; and control room emergency ventilation (CREV) [VI] initiated.

At 1932 hours the RPS bus 1B was transferred to alternate power source. By 1954 hours the UO reset the alarms, and ESF actuations were returned to standby.

TVA reports this event in accordance with 10 CFR 50.73(a)(2)(iv) as any event or condition that resulted in manual or automatic actuation of any ESF.

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

None

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)		PAGE (3)	
		SEQUENTIAL	REVISION		
Browns Ferry Unit 1		YEAR	NUMBER	NUMBER	
		05	00	02	03 of 05

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

C. Dates and Approximate Times of Major Occurrences:

- April 24, 1992 at 1842 CDST UO received ESF actuations.
- April 24, 1992 at 1932 CDST RPS bus 1B was placed on alternative power source.
- April 24, 1992 at 1954 CDST UO reset the alarms, and ESF actuations were returned to standby.
- April 24, 1992 at 2111 CDST An ENS report was made to the NRC in accordance with 10 CFR 50.72(b)(2)(ii).

D. Other Systems or Secondary Functions Affected:

None

E. Method of Discovery:

This event was immediately known to the UO upon receiving indication of an isolation of the reactor building and refueling zone ventilation and the initiation of ESF equipment.

F. Operator Actions:

Unit 1 RPS Bus B was placed on alternative power, alarms were reset, and ESF actuations were returned to standby.

G. Safety System Responses:

Loss of power to RPS bus 1B resulted in a partial Group 6 PCIS actuation. The PCIS actuation was partial because some of the Unit 1 ESF equipment which could have actuated was tagged out at the time of the event. The PCIS actuation included the Unit 1 reactor building and refueling zone ventilation system isolation; A, B, and C SGTS, and A and B CRFV systems started and affected all three units.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Browns Ferry Unit 1		05	00	02	15	9
		9	12	--	0	0
					2	--
					0	1
					0	4
					0	15

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

III. CAUSE OF THE EVENT

A. Immediate Cause:

The immediate cause for the RPS bus 1B to deenergize was an unexpected failure resulting in a generator field overvoltage trip. At the time of the event, no work activities were in progress that could have caused the RPS bus 1B to deenergize.

B. Root Cause:

The root cause was an unexpected failure. The reason for the unexpected failure has not been identified. However, based on electrical troubleshooting, TVA concluded the generator field experienced an overvoltage trip.

IV. ANALYSIS OF THE EVENT

All equipment performed as designed during the event; therefore, the inadvertent actuation of several ESF components did not adversely affect the health and safety of the public.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions:

Unit 1 RPS bus 1B was placed on alternative power. Alarms were reset and ESF initiations were returned to standby. As a precaution, the overvoltage relay was replaced and testing was performed on the voltage regulator under load conditions.

B. Corrective Actions to Prevent Recurrence:

The vendor will be contacted for identification of similar problems and corrective actions will be taken as required, based on the vendor findings.

VI. ADDITIONAL INFORMATION

A. Failed Components:

None.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)			
		YEAR	NUMBER	REVISION	NUMBER				
Browns Ferry Unit 1		1992	002	0	1	15	10	15	15

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

B. Previous LERs on Similar Events:

TVA reviewed previous reports to determine if similar past events have occurred and if so, why corrective actions had been unsuccessful in preventing this event.

Previous LERs have been issued as a result of the loss of BFN's RPS MG set's. However, corrective actions taken in these previous events could not have prevented the April 24, 1992 event.

VII. Commitments

The vendor will be contacted for identification of similar problems and corrective actions will be taken as required, based on the vendor findings. This contact will be completed by June 30, 1992.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].