

# PRIORITY 1

(ACCELERATED RIDS PROCESSING)

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9511060280    DOC.DATE: 95/11/02    NOTARIZED: NO    DOCKET # 05000296  
FACIL: 50-296 Browns Ferry Nuclear Power Station, Unit 3, Tennessee  
AUTH.NAME                      AUTHOR AFFILIATION  
WETZEL, S.A.                    Tennessee Valley Authority  
MACHON, R.D.                    Tennessee Valley Authority  
RECIP.NAME                      RECIPIENT AFFILIATION

SUBJECT: LER 95-004-00: on 951007, unplanned ESF actuation occurred following transfer of 480 volt shutdown board 3A to alternate supply. Caused by personnel error. RPS restored & sys returned to normal. W/951102 ltr.

DISTRIBUTION CODE: IE22T    COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6  
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

R. D. (Rick) Machon  
Vice President, Browns Ferry Nuclear Plant

November 2, 1995

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

10 CFR 50.73

Dear Sir:

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - DOCKET  
NOS. 50-259, 50-260, AND 50-296 - FACILITY OPERATING LICENSE  
DPR-33, 52, AND 68 - LICENSEE EVENT REPORT 50-296/95004**

The enclosed report provides details concerning an unplanned Engineered Safety Feature (ESF) actuation that occurred following transfer of 480V Shutdown Board 3A to its alternate supply. This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv) as an event or condition that resulted in an automatic actuation of an ESF.

Sincerely,



R. D. Machon

Enclosure

cc: See page 2

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9511060280 951102  
PDR ADOCK 05000296  
S PDR

*JE22*



U.S. Nuclear Regulatory Commission

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November 2, 1995

Enclosure

cc (Enclosure):

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**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

<b>FACILITY NAME (1)</b> Browns Ferry Nuclear Plant (BFN) Unit 3	<b>DOCKET NUMBER (2)</b> 05000296	<b>PAGE (3)</b> 1 OF 4
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**TITLE (4)** Unplanned Engineered Safety Feature (ESF) Actuation Following Transfer of 480V Shutdown Board 3A To Its Alternate Supply

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 NAME N/A	DOCKET NUMBER
10	07	95	95	004	00	11	02	95	FACILITY NAME N/A	DOCKET NUMBER

<b>OPERATING MODE (9)</b> N	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>										
<b>POWER LEVEL (10)</b> 000	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	
	20.405(a)(1)(iii)			50.73(a)(2)(i)(B)			50.73(a)(2)(viii)(A)			(Specify in Abstract below and in Text, NRC Form 366A)	
	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)**

<b>NAME</b> Stewart A. Wetzel, Acting Compliance Manager	<b>TELEPHONE NUMBER (Include Area Code)</b> (205) 729-7556
-------------------------------------------------------------	---------------------------------------------------------------

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

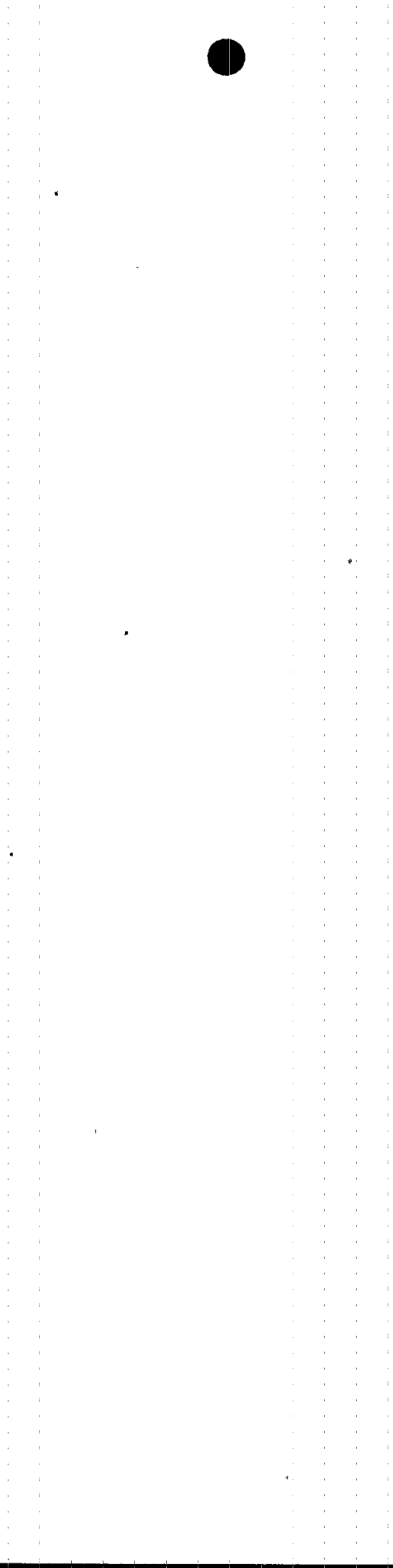
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

**SUPPLEMENTAL REPORT EXPECTED (14)**

<b>YES</b> (If yes, complete EXPECTED SUBMISSION DATE).	X	<b>NO</b>	<b>EXPECTED SUBMISSION DATE (15)</b>	<b>MONTH</b>	<b>DAY</b>	<b>YEAR</b>
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**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

On October 7, 1995, at 1217 hours during diesel generator (DG) testing, an operator received an undervoltage/transfer alarm on 480V Shutdown Board 3A. Subsequently, the operator transferred power for the board from its normal supply to its alternate supply (4kV Shutdown Board 3EB). However, the alternate supply had experienced a loss of voltage due to a DG output breaker trip. This loss of power to the 480V Shutdown Board caused Reactor Protection System Bus 3A to de-energize resulting in a half scram. This initiated other ESFs, including the standby gas treatment system, control room emergency ventilation system, and primary containment isolation. At the time of this event, Unit 3 was shutdown and defueled. Unit 2 was operating at 100 percent power and Unit 1 was shutdown and in a long-term outage. The root cause of this event was personnel error. In accordance with procedural requirements, the operator should have verified power was lost prior to transferring power. Appropriate personnel corrective actions have been taken with the operator. In addition, appropriate operations personnel have been sensitized to the need to verify indications before transferring the board. This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv) as an event or condition that resulted in automatic actuation of an ESF.





ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

LICENSEE EVENT REPORT  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER 2	REVISION NUMBER	
Browns Ferry Unit 3	05000296	95	004	00	2 of 4

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

I. PLANT CONDITIONS

At the time this event occurred, Unit 3 and Unit 1 were shutdown and defueled. Unit 2 was operating at 100 percent power.

II. DESCRIPTION OF EVENT

A. Event:

On October 7, 1995, at approximately 1217 hours Central Daylight Time (CDT), the diesel generator (DG) output breaker unexpectedly tripped during DG testing. This caused the undervoltage/transfer alarm for 480V Shutdown Board 3A to alarm and deenergized 4kV Shutdown Board 3EB. Subsequently, an operator (utility, licensed) transferred power for 480V Shutdown Board 3A from its normal supply to its alternate supply (4kV Shutdown Board 3EB). However, the alternate supply had experienced a loss of voltage due to the DG output breaker trip.

This loss of power to the 480V Shutdown Board caused Reactor Protection System (RPS) [JCJ] Bus 3A to de-energize resulting in a half scram. This also resulted in primary containment isolation [JM] system groups 2, 3, 6, and 8 isolations, and standby gas treatment system [BH] and control room emergency ventilation system [VI] actuations.

At 1300 hours CDT, the RPS was restored and systems were returned to normal status. This event is reportable in accordance with 10 CFR 50.73 (a)(2)(iv) as an event or condition that resulted in an unplanned actuation of an engineered safety feature (ESF).

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

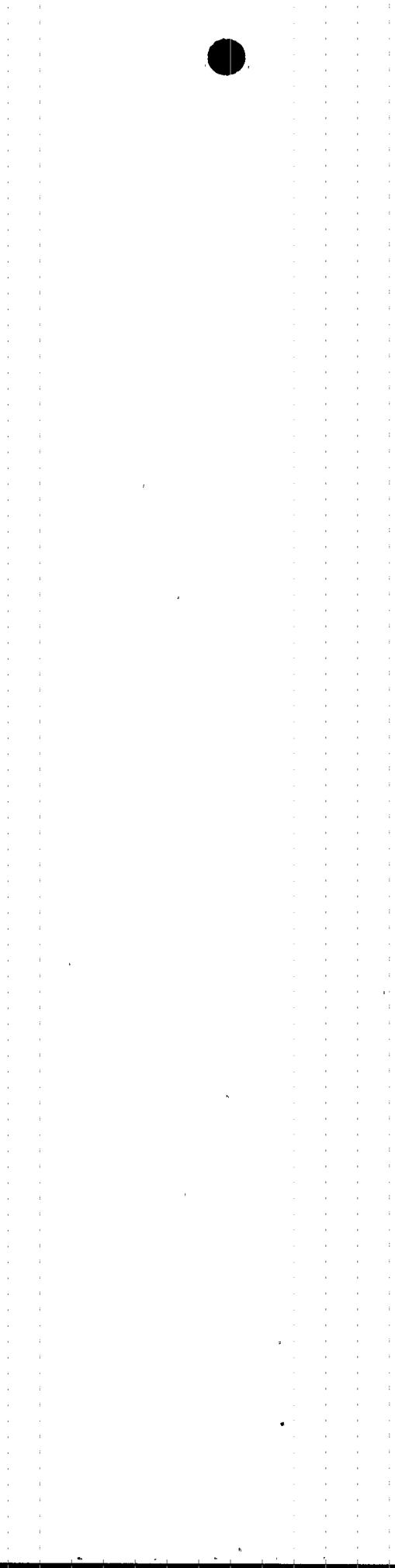
None.

C. Dates and Approximate Times of Major Occurrences:

October 7, 1995 at 1217 hours CDT	Power to Shutdown Board 3A transferred from normal supply to alternate supply
at 1300 hours CDT	RPS restored and systems returned to normal

D. Other Systems or Secondary Functions Affected:

None.



LICENSEE EVENT REPORT  
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Browns Ferry Unit 3	05000296	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 of 4
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TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

E. Method of Discovery:

This condition was discovered when the Unit Operator received the half scram on RPS Bus 3A, which initiated the ESFs.

F. Operator Actions:

The RPS was restored and systems were returned to normal.

G. Safety System Responses:

Safety systems responded as designed for this type of event.

III. CAUSE OF THE EVENT

A. Immediate Cause:

The immediate cause of this event was transferring power for 480V Shutdown Board 3A from an energized source to a deenergized source.

B. Root Cause:

The root cause of this event was personnel error. In accordance with procedural requirements, the operator should have verified the electrical board was in fact deenergized and then verify that power was available on the alternate supply prior to transferring power.

IV. ANALYSIS OF THE EVENT

The systems affected during this event are designed to shut down the reactor, contain and process any radioactive releases, and to fulfill their safety functions upon loss of initiation logic power. The systems responded correctly to the loss of power; therefore, plant safety was not adversely affected. The plant's safe shutdown capabilities would not have been diminished had the unit been in power operation. Accordingly, this event did not affect the health and safety of plant personnel or the public.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions:

The RPS was restored and systems were returned to normal.



LICENSEE EVENT REPORT  
TEXT CONTINUATION

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

B. Corrective Actions to Prevent Recurrence:

Appropriate personnel corrective actions have been taken with the operator. In addition, appropriate operations personnel have been sensitized to the need to assess plant conditions through multiple indications prior to responding to an event. Additionally, during the upcoming cycle of licensed operator training (the cycle following annual exams), TVA plans to review this event with the operators and emphasize proper transfer of the shutdown boards.<sup>1</sup>

VI. ADDITIONAL INFORMATION

A. Failed Components:

None.

B. Previous LERs on Similar Events:

There have been several LERs written to document unplanned ESFs caused by the transfer of power from 480V Shutdown Boards to their alternate source of power (LERs 260/85009, 260/88008, and 296/90002). Each instance was a non-transient transfer performed locally at the shutdown board to support maintenance or recovery from maintenance. None of these transfers were performed in the control room. In each of the LERs, the operator failed to verify the voltage supply to the alternate source before transferring power. The corrective actions to prevent recurrence involved counseling the operators on the proper transfer of power to shutdown boards, and stressing the need for attention to detail.

VII. COMMITMENTS

None.

<sup>1</sup>This is not a regulatory commitment.

Energy Industry Identification System (EIIS) system and component codes are identified in the text with brackets (e.g., [XX]).

