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Vice President, Nuclear Operations

FEB 14 1991

U.S. Nuclear Regulatory Commission  
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Washington, D.C. 20555

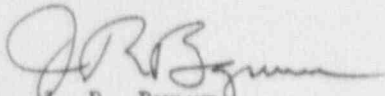
Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 1 - DOCKET NO. 50-259 -  
FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT  
BFRO-50-259/90019 R1

The enclosed report provides details concerning a loss of power on  
instrument and control bus 1A resulting in loss of various fire  
protection system detection panels placing the plant outside technical  
specifications. This report is submitted in accordance with 10 CFR  
50.73(a)(2)(i).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
J. R. Bynum

Enclosure  
cc: see page 2

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## U.S. Nuclear Regulatory Commission

FEB 14 1991

Enclosure

cc (Enclosure):

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

NRC Resident Inspector, BFN

Regional Administration  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
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Atlanta, Georgia 30323

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11555 Rockville Pike  
Rockville, Maryland 20852

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry Unit 1  
DOCKET NUMBER (2) | PAGE (3) | 050002 | 5 | 9 | 1 | OF | 0 | 3

TITLE (4) Loss of Power on Instrument and Control Bus 1A Resulted in Loss of Various Fire Protection Panels Placing the Plant Outside Technical Specifications

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)	
11	22	90	01	01	02	11	24	90	Browns Ferry Unit 2			0500021610
									Browns Ferry Unit 3			0500021916

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER (Specify in
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	Abstract below and in
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	Text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Steve Austin, Compliance Licensing Engineer	205729-2049

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)			
<input checked="" type="checkbox"/> NO			

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

On December 12, 1990 at 1245 hours, an hourly fire watch was not established when instrument and control bus 1A tripped, resulting in a loss of power to various fire protection system fire detection panels.

The root cause of this event is that the plant procedure for loss of instrument and control bus 1A did not give clear guidance for watch areas.

The corrective actions taken during the event included the return of instrument and control bus 1A to service and an attempt was made to establish compensatory actions to meet technical specifications for loss of fire detection equipment. To prevent recurrence, Operations will create a list that identifies areas that will need a firewatch upon loss of Instrument and Control Bus A.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)							
		SEQUENTIAL	REVISION									
		YEAR	NUMBER	NUMBER								
Browns Ferry Unit 1	050002	5	9	0	1	9	0	1	0	2	0	3

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

DESCRIPTION OF EVENT

On December 12, 1990 at 1245 hours, an hourly fire watch was not established when instrument and control bus 1A [EF] tripped, resulting in a loss of power to various fire protection [KP] system fire detection [IC] panels.

At 0950 hours, the 480V breaker in shutdown board 1A [ED] tripped, resulting in loss of supply power to instrument and control bus 1A. At 1040 hours, plant personnel restored power to instrument and control bus 1A, and at 1045 hours, the 480V breaker feeding the bus again tripped, resulting in loss of instrument and control bus 1A. At this time, fire protection personnel were notified that the instrument and control bus had tripped resulting in loss of power to various fire protection panels and fire watches would need to be established.

At 1250 hours, instrument and control bus 1A was returned to service, thus returning the fire detection panels to service.

During this event, units 1, 2, and 3 were defueled. The failure to establish compensatory measures during loss of power to the fire protection panels feed from instrument and control bus 1A resulted in a failure to meet technical specifications. Failure to meet technical specifications is reportable under 10 CFR 50.73(a)(2)(i)(B).

ANALYSIS OF EVENT

The fire detection system equipment is installed in areas where a possible fire could cause equipment failures or prevent safe shutdown of the plant if the fire were allowed to progress undetected. The detection panels involved in this event were powered by the instrument and control bus which supplied by their associated 480V to 120/208V transformers which in turn are supplied from independent 480V shutdown boards.

This event began with a failure of instrument and control bus 1A transformer which led to the loss of power to the various fire protection panels. Technical specifications require that the detection instrumentation for each zone be operable whenever equipment protected by the fire detection instrumentation is required to be operable. Compensatory measure for failure of the detection equipment require that a patrolling fire watch be established to ensure each protected zone or area is checked at intervals no greater than once each hour.

During the event the fire protection personnel were notified to initiate a Fire Protection Equipment and Barrier Penetration Removal From Service Permit (Attachment F) and establish the necessary fire watches. Attachment F was not completed and fire watches were not established in the required one-hour time frame as required by technical specifications.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)				
		YEAR	SEQUENTIAL	REVISION						
			NUMBER	NUMBER						
Browns Ferry Unit 1	0500025990	0	1	9	0	1	0	3	0	3

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

CAUSE OF EVENT

The root cause of this event is that plant procedure did not provide clear guidance for areas requiring fire watches. There are no procedures which identify areas that will require a fire watch upon loss of fire protection fire detection panels resulting from loss of power from instrument and control bus 1A. The documentation required to be completed in order to establish compensatory measures for loss of the fire protection detection systems that were inoperable when instrument and control bus 1A was out of service required more than one hour to be properly completed.

CORRECTIVE ACTION

The immediate corrective actions during the event was to return instrument and control bus 1A to service. Additionally, an attempt was made to establish compensatory measures for the fire protection detection equipment that was out of service. Because of the time it took to issue an Attachment F, compensatory measures for loss of fire detection were not established before the instrument and control bus could be returned to service.

Corrective actions necessary to prevent recurrence will include the creation of a list of areas and fire watches needed when the I and C Bus is lost

PREVIOUS SIMILAR EVENTS

There have been numerous instances at Browns Ferry where a fire watch was not established to meet technical specifications. There have been three (3) other instances that concerned compensatory measures for fire watches. However, no events have been identified where appropriate compensatory measures were not established in the allowed time limit during a loss of power to several fire detection panels.

COMMITMENTS

Create a list that provides clear guidelines for needed fire watches when the I and C Bus is lost. This action will be completed by March 22, 1991.