

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Browns Ferry - Units 1, 2, and 3DOCKET NUMBER (2)
0 5 0 0 0 2 5 9 1 OF 0 2TITLE (4)
Design Error in Standby Gas Treatment Cable Routing

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 4	0 8	8 5	8 5	0 1 2	0 0 0	4 3	0 8	5	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)									
POWER LEVEL (10) 0 0 0	N	20.402(b)	20.405(c)	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 Abstract below and in Text, NRC Form 366A)						
		20.405(a)(1)(iii)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(A)							
		20.405(a)(1)(iv)	50.73(a)(2)(iii)	50.73(a)(2)(viii)(B)							
		20.405(a)(1)(v)	50.73(a)(2)(ix)	50.73(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)
NAME: Alan W. Gordon
TELEPHONE NUMBER: 2 0 5 7 2 9 - 2 5 3 7
AREA CODE: 2 0 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) ☐ NO ☒
EXPECTED SUBMISSION DATE (15)
MONTH: DAY: YEAR:

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

A design drawing error allowed standby gas treatment system (SGTS) divisional cables to be routed through fire stop/pressure seals using spare cables that have been designated for use by nonsafety related circuits only. Coincident to this event a junction box (JBX) was determined to be seismically unqualified. The SGTS train A was subsequently declared inoperable and compensatory measures were taken.

The junction box was remounted to meet seismic criteria. Design personnel involved with cable and conduit will be warned to comply with the applicable NRC commitments on cable routing, and a revision to a commitment is being investigated. No safety limits were exceeded during this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Browns Ferry - Units 1, 2, and 3	05000259	85	-012	-00	02	OF	02

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

Unit 1 was in cold shutdown, unit 2 was in a refueling outage, and unit 3 was in cold shutdown.

On April 8, 1985, while implementing a modification workplan, electrical modifications engineers discovered divisional cables that had been routed and installed through cable tray fire stop/pressure seals using miscellaneous cables that were designated for nondivisional cables only. The subject cables are for standby gas treatment system (SGTS) filter (FLT) train A and train B blowers (BLO). Although divisional separation was maintained, they were not installed according to the "Plan for Evaluation, Repair, and Return to Service of Browns Ferry Units 1 and 2" (Fire Recovery Plan) Part X, Section 4.1.2.2. This section states that the spare cables will be used only for nonsafety related circuits.

A safety analysis performed by OE has justified leaving the cables in their present configuration. Possible revision of the Fire Recovery Plan is being pursued to allow selective spare cables to be used for safety related circuits that meet separation criteria. In the interim, OE personnel involved will be instructed not to use spare cables installed through electrical fire stop penetrations for safety related circuits.

During inspections related to this event, one junction box (JBX) for the cables in question could not be seismically qualified. The SGTS train A was subsequently declared inoperable. As a precautionary measure the drywells were sealed, and fuel movement was stopped. Cables associated with damper control and position indication terminate in this box. Design changes were initiated, and the junction box was remounted.

A safety analysis has determined that the worst condition that would have existed in a seismic event was equivalent to tag out of SGTS train A. However, since only two of the three SGTS trains must be operational for secondary containment integrity, inoperability of another train would be required to produce an unsafe configuration.

The root cause of this condition was personnel error in the design and checking of the cable routing. A design drawing was issued in error by Office of Engineering (OE) by electrical engineers of one to five years Browns Ferry experience.

Responsible Plant Section - OE

Previous Events - BFRO-50-259/84021

TENNESSEE VALLEY AUTHORITY

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

April 30, 1985

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

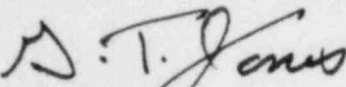
Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE
OCCURRENCE REPORT BFRO-50-259/85012

The enclosed report provides details concerning a design error in the
standby gas treatment cable routing. This report is submitted in
accordance with 10 CFR 50.73 (a)(2)(ii).

Very truly yours,

TENNESSEE VALLEY AUTHORITY



G. T. Jones
Plant Manager
Browns Ferry Nuclear Plant

Enclosures

cc (Enclosures):

Regional Administrator
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, BFN

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