

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry - Units 1, 2, and 3	DOCKET NUMBER (2) 0 5 0 0 0 2 5 9 1	PAGE (3) 1 OF 0 3
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TITLE (4)  
Failure to Meet Design Basis for Cable Separation

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(S)	DOCKET NUMBER(S)
0 5	0 5	8 4	8 4	0 2 1	0 2	0 8	3 1	8 4	Browns Ferry - Unit 2	0 5 0 0 0 2 6 0
									Browns Ferry - Unit 3	0 5 0 0 0 2 9 6

OPERATING MODE (9)  N

POWER LEVEL (10) 1 0 0

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

20.402(b)	20.408(e)	80.73(a)(2)(iv)	73.71(b)
20.408(a)(1)(i)	80.38(a)(1)	80.73(a)(2)(v)	73.71(e)
20.408(a)(1)(ii)	80.38(a)(2)	80.73(a)(2)(vii)	<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 305A)
20.408(a)(1)(iii)	80.73(a)(2)(i)	80.73(a)(2)(viii)(A)	Part 21
20.408(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(viii)(B)	
20.408(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME W. A. Roberts, Jr.	TELEPHONE NUMBER
	AREA CODE: 2 0 5 7 2 9 - 0 7 8 8

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)

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)

Browns Ferry's Final Safety Analysis Report, sections 10.11 and 8.9, and the Browns Ferry Fire Recovery Plan (part X, section A, paragraph 3.1.2) require the cables for the relief valves assigned to the automatic depressurization system to be separated from the cables for nonautomatic depressurization system relief valves, and that the cables for the high pressure coolant injection system be separated from the cables for the automatic depressurization system. Due to design errors during the recovery modification after the 1975 Browns Ferry fire, this separation was not fully achieved. During a later modification, the separation which had been achieved was degraded. This error was found by TVA's Engineering Design group during the 10 CFR 50, Appendix R evaluation and was reported by a nonconformance report.

Immediate corrective action was to place fire watches in the areas of inadequate separation, place into effect administrative controls regarding relief valve operability, perform an interim modification to unit 2, and issue changes to operating instructions regarding a fire in the affected areas.

Design Change Request P-3004 has been initiated to separate the high pressure coolant injection and automatic depressurization system division 1 cables (lack of separation would have the potential to cause failure of both systems). Also, safety relief valve control and power cables will be separated to meet Appendix R requirements and to assure that four safety relief valves (manual mode) are available for a reactor building fire.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 8   4	SEQUENTIAL NUMBER -   0   2   1	REVISION NUMBER -   0   2			

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

Unit 1 was at 100 percent power, unit 2 was at 61 percent power, and unit 3 was in a refueling outage. Units 1, 2, and 3 were affected by this event.

At 2115 on May 5, 1984, it was determined that: (1) cabling (CBL) for the main steam relief valves (RV) assigned to the automatic depressurization system was not adequately separated from cabling for nonautomatic depressurization system main steam relief valves; (2) cabling for the high pressure coolant injection (BJ) system was not adequately separated from automatic depressurization system cabling. This is contrary to the design basis of final safety analysis report, sections 10.11 and 8.9, and the Browns Ferry Fire Recovery Plan (part X, section A, paragraph 3.1.2). These errors were discovered during TVA's design review for 10 CFR 50, Appendix R evaluation and recorded by a nonconformance report to the site.

Immediate corrective action was to establish a fire watch at 2300 on May 8, 1984 at the areas of inadequate separation on the operating units. An evaluation had previously determined that four relief valves are adequate to achieve safe shutdown in the event of a fire. Administrative controls were initiated to identify the particular valves which would be available and to revise operating instructions accordingly; these actions were completed May 10, 1984.

It was subsequently determined that four relief valves on unit 1 were adequately separated and could be operated from either the control room or the backup control center in the event of a fire. Interim modifications on unit 2 were completed May 24, 1984 to achieve adequate separation in accordance with the fire recovery plan and to provide a minimum of four operable relief valves in the event of a fire. Fire watches were removed, but were later reestablished after discussions with NRC Region II.

This situation was caused by design error during recovery from the 1/75 Browns Ferry fire and further complicated by later modification.

This error was found by TVA's Engineering Design group as part of the Appendix R review which is ongoing.

A design change request (DCR No. P-3004) has been submitted that requests a modification which will provide separation between the high pressure coolant injection system division 1 cable and the automatic depressurization system division 1 cable (a lack of separation would have the potential to cause failure of both systems.) This is scheduled for each unit's next refueling outage in accordance with the integrated schedule currently to begin with the upcoming unit 2 outage. The fire watch will be extended to unit 3 before restart from the current refueling outage and will remain in affect for each unit while operating until this modification is completed for each unit.

Safety relief valve control and power cables will be separated to meet Appendix R requirements and to assure that four safety relief valves (manual mode) are available for a reactor building fire. This will supersede the fire recovery plan commitment. Appendix R modifications are scheduled in accordance with the Browns Ferry integrated schedule.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 365A's) (17)

This event is deemed Part 21 reportable. TVA, Office of Engineering, is the designer of the cabling for main steam relief valves, automatic depressurization valves, and the high pressure coolant injection system.

Safety Analysis

A similar design error was identified in three other boiling water reactors as noted in Inspection and Enforcement Notice 79-32. As identified for those plants there is no significant decrease in the health and safety of the public.

Responsible Plant Section - ED

Previous Similar Events - None

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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

August 31, 1984

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

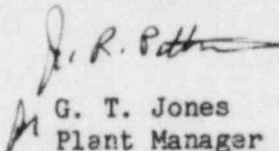
Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET  
NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE  
REPORT BFRO-50-259/84021 R2

The enclosed updated report provides additional details concerning failure  
to meet design basis for cable separation. This report was originally  
submitted in accordance with 10 CFR 50.73 (a)(2)(ii) and was determined to  
be Part 21 reportable.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
G. T. Jones  
Plant Manager  
Browns Ferry Nuclear Plant

Enclosure

cc (Enclosure):  
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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