

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Browns Ferry - Units 1 and 2</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 2 1 5 9</b>	PAGE(S) <b>1 OF 0 2</b>
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TITLE (4)  
**Design Oversight on Load Shed Logic**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (5)																																										
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)																																								
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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9)</td> <td style="width:15%;">N</td> <td colspan="10">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8 (Check one or more of the following) (11)</td> </tr> <tr> <td rowspan="5">POWER LEVEL (10) <b>0 9 1 6</b></td> <td></td> <td><input type="checkbox"/> 20.402(b)</td> <td><input type="checkbox"/> 20.405(c)</td> <td><input type="checkbox"/> 50.73(a)(2)(iv)</td> <td><input type="checkbox"/> 73.71(b)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 20.405(a)(1)(i)</td> <td><input type="checkbox"/> 50.36(c)(1)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)</td> <td><input type="checkbox"/> 73.71(c)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 20.405(a)(1)(ii)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(vii)</td> <td rowspan="3">OTHER (Specify in Abstract below and in Text, NRC Form 300A)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 20.405(a)(1)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 20.405(a)(1)(iv)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 20.405(a)(1)(v)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ix)</td> </tr> </table>												OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8 (Check one or more of the following) (11)										POWER LEVEL (10) <b>0 9 1 6</b>		<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)	OTHER (Specify in Abstract below and in Text, NRC Form 300A)		<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)		<input type="checkbox"/> 20.405(a)(1)(iv)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)		<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)
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LICENSEE CONTACT FOR THIS LER (12)

NAME <b>Jimmy B. Walker</b>	TELEPHONE NUMBER <b>2 0 5 7 1 2 1 9 1 - 1 0 1 8 1 6 1 5</b>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

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 10 CFR 50, Appendix R evaluation investigation determined that during a design basis accident and a loss of offsite power, equipment necessary for vital electrical board cooling could be lost from service due to a design oversight.

As interim corrective measures, operating instructions have been modified to provide for restarting the necessary equipment within one hour by using electrical jumpers and/or mechanically providing an exhaust air path. Long-term correction will be made as part of the necessary 10 CFR 50, Appendix R, modification.

*IE 22*

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Browns Ferry - Units 1 and 2	DOCKET NUMBER (2)  0 5   0   0   0   2   5   9	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8   4	- 0   2   2	- 0   0	0   2	OF	0   2

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

Unit 1 was operating at 96 percent power, unit 2 was operating at 59 percent power, and unit 3 was in a refueling outage. Units 1 and 2 were the only units affected by this event.

On May 12, 1984 during 10 CFR 50, Appendix R, evaluations, it was determined that during a design basis accident necessary cooling equipment for electrical board rooms for units 1 and 2 could be lost under certain events. Because of a design error, the normal exhaust fans (FAN) for units 1 and 2 electrical board rooms A, B, C, and D are automatically and permanently load shed from their power supply upon receipt of an accident signal (LOCA) and concurrent loss of offsite power.

A single failure of a reactor motor operated valve board (ECBD) (1A or 2A) causes the loss of both the normal exhaust fan and the emergency air-conditioners (ACU) for the rooms (1A board effects electrical board rooms A and B; 2A board effects electrical board rooms C and D). This is contrary to Final Safety Analysis Report, Section 10.12.5. (Note: Room cooling is dependent upon either the exhaust fan or the emergency air-conditioner.)

The Plant Operating Instruction - 57, and Emergency Operating Instruction - 36 were revised May 12, 1984 to include appropriate action to be taken upon loss of the cooling units listed above. The instruction options include jumpering the 480V load shed logic contacts on the exhaust fan within the first hour of losing ventilation, placing the normal supply fan power source on the appropriate electrical board and/or providing an exhaust path in the exhaust fan ductwork (DUCT) for short-term measures.

Analysis shows that essential equipment in the rooms would function for at least one hour under this situation. After this time, it is most likely that electrical boards/loads would begin to trip, alarming in the control room. Appropriate operator response would be to investigate and restart ventilation systems. The actual time to troubleshoot and get systems restarted would vary, and loads would be lost which cannot be predicted precisely.

Long-term corrective action will be to review the ventilation circuits for the shutdown board rooms for compliance with 10 CFR 50, Appendix R, requirements. This evaluation will continue and additional modifications are expected in response to 10 CFR 50, Appendix R, requirements.

Responsible Section - ED

Previous Similar Events - None

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

Browns Ferry Nuclear Plant

P. O. Box 2000

Decatur, Alabama 35602

June 8, 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-50-259/84022

The enclosed report provides details concerning a design oversight on load  
shed logic. This report is submitted in accordance with 10 CFR 50.73  
(a)(2)(ii).

Very truly yours,

TENNESSEE VALLEY AUTHORITY



G. T. Jones  
Power Plant Superintendent  
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, GA 30303

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

NRC Resident Inspector, BFN

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