NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Browns Ferry - Unit 3	0 5 0 0 0 2 9 6	1 OF 0 2

TITLE (4)

Manual Scram of Unit 3

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)
0 1	0 7	8 5	8 5	0 0 2	0 0	0 2	0 5	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	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)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		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)

NAME	TELEPHONE NUMBER
	AREA CODE
Alan W. Gordon	2 0 5 7 2 9 - 2 5 3 7

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
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

A breaker (BKR) supplying power to an instrument panel tripped when maintenance personnel inadvertently allowed the power cable on a temperature transmitter (TT) to short to ground. Temperature control valve (TCV) logic from several panels was interrupted and a subsequent reduction of raw cooling water (RCW) to both recirculation pump motor-generator (MG) set oil coolers caused the MG sets to trip. By the time power and RCW flow was restored, the temperature difference between the dome and bottom head drain was in excess of that permitted by the technical specification for restarting the recirculation pumps so the reactor was manually scrammed.

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

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

During normal operation, unit 1 was operating at 97 percent, unit 2 was in a refueling outage, and unit 3 was operating at 100 percent. Only unit 3 was affected by this event.

While performing maintenance on a temperature transmitter to reactor feedwater, the power cable accidentally shorted to ground, tripping a breaker that supplies several instrument panels. The loss of power to the panels controlling raw cooling water flow to recirculation pump MG set "A" and "B" oil coolers caused the electrical to pressure (E/P) converters to give a false signal to the temperature controllers. As a result, the temperature control valves went full closed. Additionally, the raw cooling water temperature control valves for reactor building closed cooling water heat exchangers "A" and "B" closed due to a loss of power to their panel. The licensed unit operator began venting the drywell after increased temperature and pressure were noted. Ultimately, both recirculation pump MG sets tripped on high oil temperature. At this point, the licensed unit operator inserted control rods to reduce the load.

By the time the breaker was reset and the raw cooling water flow reestablished, the temperature difference between the dome and bottom head drain was in excess of that permitted by the technical specification for restarting the recirculation pumps. When it became apparent that this temperature difference could not be restored within limits of operating conditions and that manipulating the rod pattern to an acceptable sequence for controlled shutdown would be very difficult without recirculation pumps, the decision was made to manually scram the reactor.

The breaker trip should have caused an alarm in the control room, which would have shortened the response time. The alarm circuit for the breaker was checked, and a bad card was found. Appropriate maintenance people will be briefed on the cause of this event. No safety limits were exceeded, and no further corrective action is planned.

Responsible Plant Section - NA

Previous Similar Events - None

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

February 5, 1985

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 3 - DOCKET NO. 50-296 - FACILITY OPERATING LICENSE DPR-68 - REPORTABLE OCCURRENCE REPORT BFRO-50-296/85002

The enclosed report provides details concerning the manual scram of unit 3. This report is submitted in accordance with 10 CFR 50.73 (a)(2)(i).

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
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Atlanta, Georgia 30303

NRC Resident Inspector, BFN

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
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