



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

Joseph R. Bynum
Vice President, Nuclear Operations

MAY 11 1991

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

Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 2 - DOCKET NO. 50-260 -
FACILITY OPERATING LICENSE DPR-52 - REPORTABLE OCCURRENCE REPORT
BFRO-50-260/91009

The enclosed report provides details concerning an inadvertent main steam
isolation valve closure during surveillance testing. This report is
submitted in accordance with 10 CFR 50.73(a)(2)(iv).

TVA is continuing its investigation of this event and will issue a
supplement to this report by June 17, 1991.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


J. R. Bynum

Enclosure
cc: see page 2

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U.S. Nuclear Regulatory Commission

MAY 11 1991

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
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30323

Thierry M. Ross
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry Unit 2										DOCKET NUMBER (2) PAGE (3) 01501010 216 10 110F 01														
TITLE (4) Inadvertent Main Steam Isolation Valve Closure During Surveillance Testing																								
EVENT DAY (5)					LER NUMBER (6)					REPORT DATE (7)					OTHER FACILITIES INVOLVED (8)									
					SEQUENTIAL REVISION					FACILITY NAMES					DOCKET NUMBER(S)									
MONTH DAY YEAR YEAR					NUMBER NUMBER					MONTH DAY YEAR					01501010 11									
0 4 11 29 11					0 0 9 0 0					0 5 11 19 11					01501010 11									
OPERATING MODE (9) THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 6: (Check one or more of the following)(11)																								
N					20.402(b)					20.405(c)					x 50.73(a)(2)(iv) 73.71(b)									
POWER					20.405(a)(1)(i)					50.36(c)(1)					50.73(a)(2)(v) 73.71(c)									
LEVEL					20.405(a)(1)(ii)					50.36(c)(2)					50.73(a)(2)(vii) OTHER (Specify in									
(10) 0 0 0					20.405(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(viii)(A) Abstract below and in									
					20.405(a)(1)(iv)					50.73(a)(2)(ii)					50.73(a)(2)(viii)(B) Text, NRC Form 366A)									
					20.405(a)(1)(v)					50.73(a)(2)(iii)					50.73(a)(2)(x)									
LICENSEE CONTACT FOR THIS LER (12)																								
NAME										TELEPHONE NUMBER														
G. M. Morrison, Compliance Licensing Engineer										AREA CODE 2 0 5 7 2 9 - 2 0 7 0														
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																								
CAUSE					SYSTEM					COMPONENT					MANUFACTURER					REPORTABLE TO NPRDS				
SUPPLEMENTAL REPORT EXPECTED (14)																								
X YES (If yes, complete EXPECTED SUBMISSION DATE)										NO														
DATE (15) 0 6 1 7 9 1																								
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																								

On April 12, 1991, at 0034 hours, an unplanned Engineered Safety Feature actuation occurred when the outboard main steam isolation valves closed inadvertently during the performance of a Surveillance Instruction.

TVA is presently conducting an investigation of this event. TVA will report the results in a supplement to this Licensee Event Report.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)				
		SEQUENTIAL		REVISION		PAGE		PAGE		
		YEAR	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	
Browns Ferry Unit 2	0500026091	0	0	9	0	0	0	2	0	2

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

DESCRIPTION OF EVENT

On April 12, 1991, at 0034 hours, an unplanned Engineered Safety Feature (ESF) actuation occurred when the outboard main steam isolation valves (MSIVs) closed inadvertently during the performance of a surveillance test. The isolation logic for each MSIV has an AC and a DC pilot solenoid valve which must be de-energized to complete the logic to close the valve. Prior to the beginning of the surveillance test, a relay which was associated with the MSIV isolation logic had been removed and was scheduled for replacement; however, no replacement was available at the time the work was performed. To support an unrelated hydrostatic test, it was decided to restore the MSIV position indicating lights which were removed from service when a clearance for the replacement of the relay was implemented. The wires to the relay were left unterminated and the fuses were re-installed. Although the initial impact evaluation for the relay replacement addressed the fact that the DC power to the outboard MSIVs would be de-energized no re-evaluation was performed to assess the effect of re-installing the fuses with the relay removed. The effect of this action was to de-energize the DC pilot solenoid circuit. With the DC pilot solenoids de-energized only the AC pilot solenoids remained to maintain the MSIVs in an open position.

During the performance of the surveillance test a reactor vessel water level transmitter was removed from service by isolating its high and low sides at the manifold and opening the equalizing valve across the transmitter. When the transmitter was isolated, valve packing leaks allowed the high side to depressurize simulating a drop in vessel water level. When this low-low-low reactor water level signal was introduced into the train B outboard MSIV logic, the AC pilot solenoids were de-energized. The loss of the AC solenoids with the DC solenoids already de-energized resulting in the completion of the isolation logic and closure of the outboard MSIVs.

Unit 2 was in cold shutdown condition. Units 1 and 3 were shutdown and defueled at the time of this event. No fuel handling or operations over spent fuel were in progress during this event. Actuations of the ESF systems are reportable in accordance with 10 CFR 59.73(a)(2)(iv).

COMMITMENTS

TVA will issue a supplement to this Licensee Event Report by June 17, 1991.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].