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10CFR50.73



Nuclear  
Operations

December 28, 1989  
NRC-89-0261

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

Reference: Fermi 2  
NRC Docket No. 50-341  
Facility Operating License No. NPF-43

Subject: Licensee Event Report (LER) No. 89-032-00

Please find enclosed LER No. 89-032-00, dated December 28, 1989, for a reportable event that occurred on November 29, 1989. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Joseph Pendergast at (313) 586-1682.

Sincerely,

*William S. Orser*

Enclosure: NRC Forms 366, 366A

cc: A. B. Davis  
J. R. Eckert  
R. W. Defayette/W. L. Axelson  
W. G. Rogers  
J. F. Stang

Wayne County Emergency  
Management Division

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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Fermi 2										DOCKET NUMBER (2) 0 5 0 0 0 3 4 1 1 OF 0 4										PAGE (3) 1 OF 0 4							
TITLE (4) "Engineered Safety Feature Actuations Which Occurred Due to a Blown Fuse"																											
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 N/A			DOCKET NUMBER(S) 0 5 0 0 0 0															
1	1	2	9	8	9	8	9	0	3	2	0	0	1	2	2	8	8	9	N/A			0 5 0 0 0 0					
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																									
4		20.402(b)			20.405(e)			<input checked="" type="checkbox"/> 60.73(a)(2)(iv)			73.71(b)																
POWER LEVEL (10)		0 0 0			20.406(a)(1)(i)			60.38(e)(1)			60.73(a)(2)(v)			73.71(c)													
		20.406(a)(1)(ii)			60.38(e)(2)			60.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)																
		20.406(a)(1)(iii)			60.73(a)(2)(i)			60.73(a)(2)(viii)(A)																			
		20.406(a)(1)(iv)			60.73(a)(2)(ii)			60.73(a)(2)(viii)(B)																			
		20.406(a)(1)(v)			60.73(a)(2)(iii)			60.73(a)(2)(ix)																			
LICENSEE CONTACT FOR THIS LER (12)												TELEPHONE NUMBER															
NAME Joseph Pendergast, Licensing Engineer												AREA CODE 3 1 3 5 8 6 1 1 6 8 2															
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	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC													
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR													
<input type="checkbox"/> YES / If yes, complete EXPECTED SUBMISSION DATE: <input checked="" type="checkbox"/> NO																											

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

On November 28, 1989, at 1630 hours Instrument & Controls (I&C) personnel signed on to surveillance 44.020.014" NSSSS-Reactor Vessel Low Water Level (Levels 1 And 2), Division II, Channel D Response Time Test, Phase III". During set up for this surveillance, a fuse blew in a safety system panel and was not immediately identified. On November 29, at 0140 hours, several safety systems actuated and/or isolated out of sequence during the performance of the surveillance.

There were three causes for this event; all related to the fact that plant personnel did not realize fuse ATIB-F10 had blown in Panel H11P611.

The blown fuse was replaced. The affected systems were returned to normal operation, following which the surveillance was completed. An Accountability Meeting was held with the personnel involved and plant management. A critique will be written for this event and given to I&C and Operations Personnel as required reading. Procedures will be reviewed for possible revisions to prevent recurrence.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Fermi 2	DOCKET NUMBER (2)  0500034189	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			032	00	02	OF	04

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

Initial Plant Conditions:

Operational Condition: 4 (Cold Shutdown)  
Reactor Power: 0 Percent  
Reactor Temperature: 135 degree Fahrenheit  
Reactor Pressure: 0 psig

Description of the Event:

On November 28, 1989, at 1630 hours, Instrument & Controls (I&C) personnel signed on to surveillance 44.020.014 "NSSSS-Reactor Vessel Low Water Level (Levels 1 And 2), Division II, Channel D Response Time Test, Phase III". This surveillance involves six recorders (MON) monitoring thirty eight trip and actuation functions associated with the Reactor Vessel Low Water signal. Preparation for this test requires approximately ten hours where I&C personnel hook up recorders to the appropriate system logic circuits.

At 2217 hours, I&C personnel also signed on surveillance 44.040.009 "ATWS-Div 1 Logic Functional Test". At 2252 hours during the performance of this surveillance, annunciator (IB) window 2D36 "NSSSS Rx Vessel H2O Level L2 Channel B Trip" alarmed. It was incorrectly assumed by Operations personnel coordinating these surveillances (44.040.009 and 44.020.014) that this alarm was an expected response for surveillance 44.040.009. A fuse (FU) ATIB-F10 had actually blown in Panel H11P611 during the ongoing set up for surveillance 44.020.014. Therefore, the actual cause for the alarm was not identified at that time. At 2350 hours, 44.040.009 was completed.

On November 29, 1989, at 0140 hours, Phase III of surveillance 44.020.014 was in progress. Step 6.3.6 in the procedure required I&C personnel in the Relay Room to flip the Test Switches to their test position. These switches are associated with the Main Steam Drain Logic, Reactor Water Clean-Up Logic, Isolation Valve Containment Logic Inboard, Sample Valve Logic Inboard, and Nitrogen Isolation Auto Close Signal. This was in preparation for step 6.3.11 of the procedure where these actuation and isolation logics would be initiated.

As the I&C Repairman flipped the switches to test, the following systems actuation and/or isolation logic was completed since fuse ATIB-F10 was blown. The Division II Control Air Compressor (CAC) (COMP), and Standby Gas Treatment System (SGTS) (BH) automatically started, Control Center Heating Ventilation and Air Conditioning (CCHVAC) (VI) shifted to recirculation, Reactor Building Heating



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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

Ventilation and Air Conditioning (RBHVAC) (VA) isolated, and Division II Isolation Valves (ISV) isolated. The Division II Isolation Valves actuated were for the following systems: Reactor Water Clean-Up (CE), Torus Water Management (BT), Primary Containment Radiation Monitoring (IL), Primary Containment Pressure Control (JM), Nitrogen Inerting and Purging (LK), and Reactor Recirculation Sample Lines (KN).

Operations Personnel immediately recognized that the systems had initiated out of sequence at step 6.3.6 of the procedure, instead of step 6.3.11. The surveillance was halted and an investigation was begun. At 0258 hours, the blown fuse ATIB-F10 in Panel H11P611 was discovered. The fuse was replaced and the systems required to run this surveillance were returned to normal operation by 0320 hours.

The surveillance 44.020.014 was successfully completed by 1350 hours, November 29.

Cause of the Event:

There were three causes for this event; all related to the fact that plant personnel did not realize fuse ATIB-F10 had blown in Panel H11P611.

- 1) The I&C Repairman (Utility Non-Licensed) hooking up the test equipment did not realize he had blown the fuse.
- 2) Control Room Personnel (Utility Licensed) monitoring the surveillance did not realize the fuse had blown. They assumed the alarm received was due to other surveillance testing in progress.
- 3) Personnel had not checked plant conditions (i.e. alarms already present) prior to placing the switches in the test condition. This was not required by procedure.

Analysis of the Event:

The affected systems Division II CAC, SGTS, CCHVAC, RBHVAC, and Division II Isolation Valves all performed their designed safety functions when challenged. The purpose of these systems is to support plant safety systems as in the case of CAC, to maintain the habitability of the control room envelope, to maintain containment integrity, or treat plant effluents. The initiation of these systems did not prevent them from fulfilling their designed safety functions. Therefore this event did not adversely impact the health and safety of the public or plant personnel nor did it affect the safe operation of the plant.

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		0 3 2	-	0 0	0 4	OF	0 4

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

Corrective Actions:

The blown fuse was replaced, the surveillances were completed, and the affected systems were returned to normal operation.

An Accountability Meeting was held with the personnel involved and plant management. A critique will be written for this event and given to I&C and Operations Personnel as required reading. The required reading will be completed by March 31, 1990. Procedures 44.020.011, 44.020.012, 44.020.013, and 44.020.014, that govern similar tests, will be reviewed for possible revisions to prevent recurrence. This review will be completed by February 1, 1990.

Previous Similar Events:

This was the first time safety systems were actuated during the performance of this surveillance. However, safety system actuations have occurred due to blown fuses and were reported in Licensee Event Reports 89-026, 89-018, 88-017, 86-038 and 85-053.