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10CFR50.73

December 12, 1994  
NRC-94-0117

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

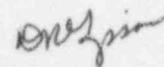
Reference: Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43

Subject: Licensee Event Report (LER) No. 94-010

Please find enclosed LER No. 94-010, dated December 12, 1994, for a reportable event that occurred on November 11, 1994. A commitment to provide training to operations and maintenance (instrumentation and controls) personnel is made in this LER. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Joseph E. Conen, Supervisor, Compliance at (313) 586-1960.

Sincerely,



Enclosure: NRC Forms 366, 366A

cc: T. G. Colburn  
J. B. Martin  
M. P. Phillips  
P. L. Torpey  
A. Vogel

Wayne County Emergency  
Management Division

9412200157 941212  
PDR ADOCK 05000341  
S PDR

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## LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Fermi 2

DOCKET NUMBER (2)

05000 341

PAGE (3)

1 OF 4

TITLE (4)

Unplanned Automatic Isolation of Shutdown Cooling Due to Surveillance Test

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	11	94	94	010	00	12	12	94		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
4	000	<div>20.402(b)</div> <div>20.405(a)(1)(i)</div> <div>20.405(a)(1)(ii)</div> <div>20.405(a)(1)(iii)</div> <div>20.405(a)(1)(iv)</div> <div>20.405(a)(1)(v)</div>			
		<div>20.405(c)</div> <div>50.36(c)(1)</div> <div>50.36(c)(2)</div> <div>50.73(a)(2)(i)</div> <div>50.73(a)(2)(ii)</div> <div>50.73(a)(2)(iii)</div>			
		<div>X 50.73(a)(2)(iv)</div> <div>50.73(a)(2)(v)</div> <div>50.73(a)(2)(vii)</div> <div>50.73(a)(2)(viii)(A)</div> <div>50.73(a)(2)(viii)(B)</div> <div>50.73(a)(2)(x)</div>			
		<div>73.71(b)</div> <div>73.71(c)</div> <div>OTHER</div> <div>(Specify in Abstract below and in Text, NRC Form 366A)</div>			

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Joseph E. Conen, Supervisor - Compliance

TELEPHONE NUMBER (Include Area Code)

(313) 586-1960

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

## SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	X				

## ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On Friday, November 11, 1994 at 1657 Hours, Residual Heat Removal Shutdown Cooling suction line inboard containment isolation valve closed automatically during the performance of an Instrumentation and Controls (I&C) surveillance. The surveillance procedure identified that this action would occur, however, Operations personnel had not adequately reviewed this procedure and had not established appropriate plant conditions prior to authorizing the surveillance. This isolation was unplanned and resulted in the interruption of shutdown cooling operation. This event was caused by inadequate review prior to authorizing the surveillance. Poor communications between Operations and I&C personnel contributed to this event.

The individuals involved in this event have been counseled regarding this event, and they have presented lessons learned from this event to the other operating shifts. Further training on this event will be provided to I&C and Operations personnel. Also, impact statements for the related surveillance procedures will be revised to stipulate that shutdown cooling shall not be in operation during these surveillances.

REQUIRED NUMBER OF DIGITS/CHARACTERS  
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME 8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Fermi 2		05000 341	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
			94	010	00	

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

Initial Plant Conditions:

Operational Condition: 4 Cold Shutdown  
Reactor Power: 0 percent  
Reactor Pressure: 0 psig  
Reactor Temperature: 116 degrees Fahrenheit

Description of the Event:

On Friday, November 11, 1994 at 1657 Hours, Residual Heat Removal (RHR)(BO) Shutdown Cooling suction line inboard containment isolation valve (E1150F009)(ISV) closed automatically during the performance of surveillance 44.020.301, NSSS - REACTOR PRESSURE - SHUTDOWN COOLING CUT IN PERMISSIVE INTERLOCK, DIVISION I FUNCTIONAL TEST. This isolation was unplanned and resulted in the interruption of shutdown cooling operation.

The surveillance performs a channel functional test of the Division I High Reactor Pressure Isolation Trip for the RHR Shutdown Cooling System. By design, performance of the surveillance generates an isolation signal which would result in the automatic closure of E1150F009, if open. The surveillance is normally performed with the RHR system in standby and E1150F009 closed; however, the valve was open and shutdown cooling was operating when the surveillance was performed on November 11. The closure of E1150F009 isolates the RHR suction line, resulting in a trip of the operating RHR Pump Motor B (loss of suction flow path) and interrupting operation of shutdown cooling. All systems and equipment performed as designed.

Following the pump trip, the shift entered Abnormal Operating Procedure 20.205.01, LOSS OF SHUTDOWN COOLING and commenced recovery actions. The surveillance 44.020.301 was signed off as completed at 1705. Once it was realized that this surveillance had caused the RHR isolation and pump trip, the Nuclear Shift Supervisor (NSS) and Nuclear Assistant Shift Supervisor (NASS) decided to take the time needed to fill and vent the RHR piping to complete 44.020.302, the Division II equivalent of the surveillance which caused the isolation. This was done to take advantage of the short RHR shutdown they were currently in, thus eliminating the requirement for a future RHR shutdown to complete the Division II surveillance. This required only a few minutes to complete, most of which was done during parallel RHR shutdown cooling recovery actions. The RHR System was restarted 37 minutes after the initial trip. There was no observable increase in reactor coolant temperature during this time.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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Fermi 2		05000 341		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
				94	010	00	

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

Cause of the Event:

This event occurred because inappropriate conditions existed when the surveillance was performed. As stated in the impact statement of the surveillance procedure, E1150F009 would close if it were open. This information is also included in the body of the procedure in the Precautions and Limitations. The Control Room staff authorizing the performance of the surveillance (NSS, NASS, and the Control Room Nuclear Supervising Operator (CRNSO))(all Utility-Licensed) did not read either the surveillance Precautions and Limitations or the impact statement effectively prior to authorizing the surveillance. They did not observe that the E1150F009 would close if it was open during the performance of the surveillance. Had they read this information, they would not have authorized performance of the surveillance at that time. The Control Room staff had allowed themselves to be distracted from their normal review of surveillances by the level of parallel activities in progress and were complacent regarding these surveillances since similarly titled surveillances had just been completed without consequence.

Contributing to this occurrence is the fact that the lead technician (Utility-Nonlicensed) performing the surveillance had read the impact statement, and he understood that E1150F009 would close during the surveillance, if opened. However, he did not discuss this fact with the operations personnel authorizing the work. Better communication and teamwork between Operations and I&C personnel could have prevented this event. In addition, although the lead technician and the I&C foreman (Utility-Nonlicensed) understood that E1150F009 would close, neither of them was aware of the significance of this control action on plant operations. While the procedure impact statement adequately identified expected control actions, it did not stipulate any required plant conditions. Had the impact statement indicated that shutdown cooling should not be operating, the I&C foreman and technician may have better understood the operational impact.

Analysis of the Event:

All equipment performed as designed, including inboard containment isolation valve E1150F009. Thus, the low pressure piping of the RHR Shutdown Cooling System would have isolated as required in response to an actual high pressure condition.

Shutdown cooling operation was interrupted for 37 minutes. This resulted in no observable increase in reactor coolant temperature. Coolant temperature remained at approximately 116 degrees Fahrenheit, well below the 200 degree limit for COLD SHUTDOWN. Thus, this event has no impact on the safe operation of the plant or the health and safety of the public.



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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (4)			PAGE (3)
Fermi 2	05000 341	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
		94	- 010 -	00	

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

Corrective Actions:

Until lessons learned from this event were disseminated to the other operating shifts, guidance was immediately provided to the operating shifts which required a face to face discussion between the NSS and the I&C foreman prior to performing a surveillance.

The NSS and NASS presented Lessons Learned from this event to the other operating shifts. These lessons included a discussion of the need to recognize and compensate for distractions; the need to effectively use existing tools, such as impact statements; the need to utilize the entire shift team effectively; and the need to maintain the value of their signatures.

Additional training on this event and expectations regarding work authorization, communications, and teamwork will be provided to Operations and I&C personnel in continuing training, including:

- o Expectations that Operations personnel should read and understand, Precautions and Limitations, Prerequisites, and the Impact Statement.
- o Expectations that I&C personnel should identify expected control actions to Operations.

Impact statements for the related surveillance procedures (44.020.301, 302, 303, and 304) will be revised to indicate that RHR shutdown cooling shall not be in operation during the performance of these surveillances.

These actions will be completed by April 28, 1995.

Previous Similar Events:

Licensee Event Reports 86-048, 87-001 and 94-008 discuss previous reportable events attributed to inadequate review of plant impact by the operating shifts or poor communication between Operations and I&C personnel.