

Detroit  
Edison

Douglas R. Gipson  
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Nuclear Generation

Fermi 2  
6400 North Dixie Highway  
Newport, Michigan 48166  
(313) 586-5249

10CFR50.73

November 4, 1996  
NRC-96-0091

U. S. Nuclear Regulatory Commission  
Attn: 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. 96-012

Pursuant to 10CFR50.73, Detroit Edison is submitting the enclosed LER No. 96-012, which documents an Engineered Safety Features (ESF) actuation of primary containment isolation valve B3100F014A.

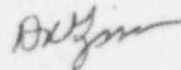
The following commitment is made in this LER:

This event will be discussed in the next session of continuing training for Instrumentation and Control (I&C) and Electrical Maintenance personnel including first line supervisors.

If you have any questions, please contact Andrew V. Antrassian, Compliance Engineer, at (313) 586-1856.

9611130185 961104  
PDR ADOCK 05000341  
S PDR

Sincerely,



cc: A. B. Beach  
M. J. Jordan  
A. J. Kugler  
A. Vogel  
M. V. Yudas, Jr.  
Region III  
Wayne County Emergency  
Management Division

120031

IF22 1/1

# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Fermi 2</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 3 4 1 1</b>	PAGE (3) <b>1</b> OF <b>4</b>
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TITLE (4) **Engineered Safety Features Actuation Of Primary Containment Isolation Valve B3100F014A**

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MON	DAY	YR	YR	SEQUENTIAL NUMBER		REVISION NUMBER	MON	DAY	YR	FACILITY NAMES		DOCKET NUMBER (S)	
10	03	96	96	-	0 1 2	- 0 0	11	04	96			0 5 0 0 0	
												0 5 0 0 0	

OPERATING MODE (9) <b>5</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (11) <div style="display: flex; justify-content: space-between;"> <div>           10 CFR <u>50.73(a)(2)(iv)</u>            OTHER - _____            (Specify in Abstract below and in text, NRC Form 366A)         </div> </div>
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LICENSEE CONTACT FOR THIS LER (12) <b>Andrew V. Antrassian - Compliance Engineer</b>	TELEPHONE NUMBER AREA CODE <b>313</b> NUMBER <b>586-1856</b>
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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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO			

ABSTRACT (16)

On October 3, 1996, with the plant in Operational Condition 5 for the Fifth Refueling Outage (RFO5), an Engineered Safety Features (ESF) actuation of valve B3100F014A occurred during troubleshooting activities related to replacement of the solenoid for valve B3100F014B. Valves B3100F014A and B3100F014B are inboard primary containment isolation, air-operated, globe valves in the Recirculation Pump Seal Purge System which provides water from the control rod drive pumps to the seal cavity of Reactor Recirculation Pumps C001A (B3100F014A) and C001B (B3100F014B). During troubleshooting under an approved work request, leads were lifted from the panel side of terminal block CC-32 in relay cabinet H11P622 rather than from the field side as was intended. As a result, solenoid B31F014A was deenergized which caused air to vent from the air actuator, and primary containment isolation valve B3100F014A to reposition closed. The leads were lifted by a contract technician under the direct supervision of a Detroit Edison supervisor. The cause of this event is considered personnel error. Corrective actions include initiation of a RFO5 critique item to review training provided to contract technicians, and discussion of this event in continuing training for Instrumentation & Control and Electrical Maintenance personnel.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Fermi 2	0   5   0   0   0   3   4   1	YEAR		SEQUENTIAL NUMBER		REVISION NUMBER			
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TEXT (17)

## Initial Plant Condition:

Operational Condition: 5 (Refueling)  
 Reactor Power: 0 Percent  
 Reactor Pressure: 0 psig  
 Reactor Temperature: 87 degrees Fahrenheit

## Description of the Event:

On October 3, 1996, with the plant in Operational Condition 5 for the Fifth Refueling Outage (RFO5), an Engineered Safety Features (ESF) [JE] actuation of valve B3100F014A [JM-ISV] occurred during troubleshooting activities related to replacement of the solenoid for valve B3100F014B. Valves B3100F014A and B3100F014B are inboard primary containment isolation, air-operated, globe valves in the Recirculation Pump [AD] Seal Purge System which provides water from the control rod drive pumps to the seal cavity of Reactor Recirculation Pumps C001A (B3100F014A) and C001B (B3100F014B). On October 3, 1996, at 2200 hours, a four hour non-emergency notification was made to the Nuclear Regulatory Commission regarding this event in accordance with 10CFR50.72(b)(2)(ii).

On October 2, 1996, solenoid B31F014B [JM-PSV], the air operator for valve B3100F014B, was replaced under Work Request (WR) D997940816. On October 3, 1996, it was identified that valve B3100F014B would not stroke and WR D997940816 was revised to allow troubleshooting of the solenoid circuit.

Applicable drawings were reviewed and it was decided to lift the field side leads from terminal blocks CC-14 and CC-32 in relay cabinet H11P622 to isolate solenoid B31F014B from the rest of the circuit. The personnel assigned this troubleshooting activity were contract technicians under the direction of a Detroit Edison supervisor. The supervisor conducted a briefing with the assigned technicians and appraised Control Room personnel of the planned troubleshooting.

At approximately 1820 hours the supervisor directed the technician in relay cabinet H11P622 to lift leads from the left side of terminal blocks CC-14 and CC-32, which the supervisor believed was the field side of these terminal blocks. The left side of terminal blocks CC-14 and CC-32 is actually the panel side. The troubleshooting effort was unsuccessful and the lifted leads were relanded. The supervisor and technicians proceeded to the Control Room to report on the status of the troubleshooting. Control Room personnel informed the supervisor that indication had been received that valve B3100F014A had moved to the closed position.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (17)									OF 4

It was subsequently determined that the leads lifted in relay cabinet H11P622 were in fact panel side leads. The panel side of terminal block CC-32 has connections which provide the ground to the circuit for solenoid B31F014B and is jumpered to the panel side of terminal block CC-33 which provides the ground to the circuit for solenoid B31F014A. When the panel side leads were lifted from terminal block CC-32, the circuit was broken to terminal block CC-33. Solenoid B31F014A was deenergized which caused air to vent from the air actuator, and primary containment isolation valve B3100F014A to reposition closed. Primary containment isolation valve B3100F014B was already in the closed position.

This event is considered an unplanned ESF actuation and is being reported in accordance with 10CFR50.73(a)(2)(iv).

### Cause of the Event:

The cause of this event is considered personnel error on the part of the Detroit Edison supervisor. The intent during troubleshooting was to lift leads from the field side of terminal blocks in relay cabinet H11P622. Under direct instructions from the Detroit Edison supervisor, the contract technician in the relay cabinet lifted leads from the left side of terminal blocks CC-14 and CC-32 which is actually the panel side of these terminals blocks.

A contributing factor to this event is that it is a Detroit Edison practice to at times assign qualified Detroit Edison personnel to direct the activities of contract technicians rather than to fully train and qualify the contract technicians to Fermi 2 standards. This was the case in this particular event and consequently, the contract technician in the relay cabinet was not completely familiar with Fermi 2 equipment and practices and therefore did not have the background and questioning attitude which could have prevented this event. In addition, although the appropriate drawings were reviewed, the actual wiring configuration was not visually verified in the relay cabinet against these drawings prior to physically lifting the leads.

### Analysis of the Event:

The event is of minimal safety significance. This event occurred with the plant in Operational Condition 5 when containment integrity was not required by Technical Specifications. All affected equipment functioned as designed. In addition, Reactor Recirculation Pumps are not considered essential for safe plant shutdown under either normal or abnormal conditions.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) <b>Fermi 2</b>	DOCKET NUMBER (2) <div style="display: flex; justify-content: space-between; padding: 0 5px;"> <span>0</span><span>5</span><span>0</span><span>0</span><span>0</span><span>3</span><span>4</span><span>1</span> </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6">LER NUMBER (8)</th> <th colspan="2">PAGE (3)</th> </tr> <tr> <td style="text-align: center;">YEAR</td> <td></td> <td style="text-align: center;">SEQUENTIAL NUMBER</td> <td></td> <td style="text-align: center;">REVISION NUMBER</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">96</td> <td style="text-align: center;">-</td> <td style="text-align: center;">0 1 2</td> <td style="text-align: center;">-</td> <td style="text-align: center;">0 0</td> <td style="text-align: center;">4</td> <td style="text-align: center;">OF</td> <td style="text-align: center;">4</td> </tr> </table>	LER NUMBER (8)						PAGE (3)		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER				96	-	0 1 2	-	0 0	4	OF	4	
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### Corrective Actions:

This incident was discussed with I&C personnel in a tailgate meeting following the event.

The Detroit Edison supervisor involved in this incident was a working member of the LER investigation team and attended the lessons learned meeting conducted for this event.

A RFO5 lessons learned critique item has been initiated to review the adequacy of the current level of training for contract I&C technicians and to provide recommendations for future training.

This event will be discussed in the next session of continuing training for I&C and Electrical Maintenance personnel including first line supervisors.

### Additional Information:

#### A. Failed Components

None

#### B. Previous LERs on Similar Problems

Previous occurrences of inadvertent ESF actuations resulting from personnel error associated with lifting or landing of leads during the performance of maintenance, surveillance, or modification activities have been reported in LER 94-005, LER 89-027, LER 89-022, and LER 88-015.