

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Fermi 2	DOCKET NUMBER (2) 0 5 0 0 0 3 4 1 1	PAGE (3) 1 OF 0 3
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TITLE (4)  
Isolation of Reactor Water Cleanup System Due to Suspected Relay Failure

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 8	3 1	8 8	8 8	0 3 4	0 0 0	9 3	0 8	8 8	N/A		0 5 0 0 0
									N/A		0 5 0 0 0

OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	<input type="checkbox"/> 2J.402(b)	<input type="checkbox"/> 20.406(r)	<input checked="" type="checkbox"/> 90.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 90.38(e)(1)	<input type="checkbox"/> 90.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 90.38(e)(2)	<input type="checkbox"/> 90.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)						
	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 90.73(a)(2)(i)	<input type="checkbox"/> 90.73(a)(2)(vii)(A)							
	<input type="checkbox"/> 20.406(a)(1)(vi)	<input type="checkbox"/> 90.73(a)(2)(ii)	<input type="checkbox"/> 90.73(a)(2)(vii)(B)							
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 90.73(a)(2)(iii)	<input type="checkbox"/> 90.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER
NAME Patricia Anthony, Compliance Engineer		AREA CODE 3 1 3
		5 8 6 - 1 6 1 7

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

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (if yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO		0 1 3	1 8	9

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

The Reactor Water Cleanup System (RWCU) outboard isolation valve, G3352F004, closed and caused the RWCU pumps to trip. Plant personnel discovered that A71B-K27 was de-energized but no reason for this could be determined. The isolation signal was reset, G3352F004 was opened and the RWCU system was returned to service. An investigation by engineering personnel was initiated.

The closure of G3352F004 was caused by contacts 3-4 on relay A71B-K27 closing upon de-energization of the relay. The cause of the de-energization is under investigation.

Two relays (GE Model CR120A) in the valve isolation circuit have been replaced and the previously installed relays will be evaluated. Relay A71B-K27 has been sent to General Electric for analysis. Relay A71B-K25 will be sent to an independent laboratory for analysis. A revision to this report will be submitted within 60 days of the receipt of the results of both analyses.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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NOTE: If more space is required, use additional NRC Form 305A's (17)

Initial Plant Conditions:

Operational Condition: 4 (Cold Shutdown)  
Reactor Power: 0%  
Reactor Pressure: 0 psig  
Reactor Temperature: 151 degrees Fahrenheit

Description of Event:

At 1831 hours on August 31, 1988, the Reactor Water Cleanup System (RWCU) (CE) outboard isolation valve, G3352F004 (ISV), closed and caused the RWCU pumps (P) to trip. Plant personnel investigated the event and determined that there was no work in progress that could have caused this isolation. They discovered that relay A71B-K27 (RLY) was de-energized but no reason for this could be determined.

The isolation signal was reset at 1906 hours. At that time, G3352F004 was opened and the RWCU system was returned to service. An investigation by engineering personnel was initiated.

Cause of the Event:

The closure of G3352F004 was caused by contacts 3-4 on relay A71B-K27 closing upon de-energization of the relay. The cause of the de-energization is under investigation.

Safety Analysis:

The RWCU system functions to control reactor vessel water level and remove impurities from the reactor coolant. The system is not required for the safe shutdown of the plant. Isolation valve G3352F004 closed in accordance with its design basis when relay A71B-K27 de-energized. At no time was the health and safety of the public or plant personnel affected.

Corrective Actions:

Surveillance procedures were performed and satisfactory results obtained prior to any work performed on the logic string components. Each contact in the isolation circuit was tested for excessive voltage drop across it. The contacts were in their normal (non-isolation) condition. No significant voltage drop was identified. A walkdown of the circuit was performed to determine its physical condition, specifically inspecting for loose terminations, degraded wiring and relays. No loose terminations or degraded wiring was found.

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NOTE: If more space is required, use additional NRC Form 388A's (17)

As a result of the walkdown, two relays (GE Model CR120A) in the valve isolation circuit have been replaced. They are the most probable active components that could have caused the event. The previously installed relays will be evaluated. Relay A71B-K27 has been sent to General Electric for analysis. Relay A71B-K25 will be sent to an independent laboratory for analysis. A revision to this report will be submitted within 60 days of the receipt of the results of both analyses.

Previous Similar Events:

The events that led to confirmatory action letter CAL RIII 88-009, dated May 4, 1988, describe the failure of another GE Model CR120A relay (A71B-K18) installed in the Residual Heat Removal System.

Failed Component Data:

The following components are being investigated for potential failure:

- GE Relay Model CR120A06002AA (Relay A71B-K27)
- GE Relay Model CR120A04002AA (Relay A71B-K25)

Detroit  
Edison

William S. Orser  
Vice President  
Nuclear Operations

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10CFR50.73



Nuclear  
Operations

September 30, 1988  
NRC-88-0216

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. 88-034-00

Please find enclosed LER No. 88-034-00, dated September 30, 1988, for a reportable event that occurred on August 31, 1988. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Patricia Anthony at (313) 586-1617.

Sincerely,

Enclosure: NRC Forms 366, 366A

cc: A. B. Davis  
J. R. Eckert  
R. C. Knop  
T. R. Quay  
W. G. Rogers

Wayne County Emergency  
Management Division

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