NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)
Actuation of EECW Systems Due to RBCCW Valve Controller 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 6	1 0	8 5	8 5	0 2 3	0 0	0 7	1 0	8 5		0 5 0 0 0
										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	20.402(b)	20.405(c)	XX 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
A.E. Wegele, Compliance Engineer	3 1 3 — 5 8 6 - 5 3 1 3

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	
X	CC	P D C V	F 1 3 0	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On June 10, 1985, with the plant in Operational Condition 4, prior to initial criticality, the Reactor Building Closed Cooling Water (RBCCW) pressure differential control valve (PDCV-P42-F403) went to its full-open position at 0925 hours. This caused the differential pressure across the RBCCW system to decrease to the Emergency Equipment Cooling Water (EECW) auto-initiation setpoint. As designed, the Division I and II EECW system headers isolated and the Division I and II EECW pumps started. The EECW is an Engineered Safety Feature at Fermi-2.

During troubleshooting, the control loop for PDCV-P42-F403 was found to function properly. However, a fine dust-like crud was found on the flapper and nozzle of the controller. The controller was cleaned, bench-tested, adjusted, and reinstalled and has operated normally since this event.

Examination of the history of maintenance on this valve controller indicates that this failure is an isolated occurrence. No other failure of this air controller due to a similar cause has been documented and no further corrective action is considered necessary at this time.

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

On June 10, 1985, with the plant in Operational Condition 4, prior to initial criticality, the Reactor Building Closed Cooling Water (RBCCW) pressure differential control valve (PDCV-P42-F403) went to its full-open position at 0925 hours. This caused the differential pressure across the RBCCW system to decrease to its alarm setpoint, 53 psid. This differential pressure is monitored to assure that the RBCCW pumps are maintaining normal flow. The Nuclear Supervising Operator (NSO) nearest to Control Room Panel H11-P602 on which the valve position was indicated started the Center RBCCW pump to maintain RBCCW differential pressure. This was the proper response to the indication of low delta-P.

With PDCV-P42-F402 fully open, the RBCCW differential pressure, as read across the Division I and Division II Emergency Equipment Cooling Water (EECW) System headers, dropped below 20 psid, the setpoint for auto-initiation for EECW. (The EECW, an ESF at Fermi-2, provides cooling water for the subset of the RBCCW heat loads required to achieve safe shutdown). As designed, the Division I and II EECW system headers isolated and the Division I and II EECW pumps started.

At 0940 hours, the NSO secured the Center RBCCW pump and established local control of PDCV-P42-F403. At 0947, the NSO secured Division I and II EECW systems and placed them in auto-standby. At 0953, PDCV-P42-F403 was isolated for maintenance. Differential pressure across the RBCCW system was controlled with manual bypass valve P42-F013.

During troubleshooting, the control loop for PDCV-P42-F403 was found to function properly. When the valve controller was examined, a fine dust-like crud was found blocking the nozzle and the flapper. The repairman cleaned the controller. The controller was bench-tested in the Instrument & Controls shop and functioned normally after being adjusted to its normal settings. The controller was then reinstalled and has operated properly since.

The root cause of the controller failure appears to be the dust-like crud on the flapper and nozzle. The gap between the flapper and nozzle is critical to the controller's operation. Any change to this gap such as the dust-like crud buildup would cause the controller to malfunction. Examination of the history of maintenance on this valve indicates that this failure is an isolated occurrence. No other failure of this air controller due to a similar cause has been documented. Therefore, no further action is planned at this time.

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

The RBCCW/EECW systems are designed to accommodate this failure and responded as designed in the June 10 event. Had this controller failure occurred at full power, the resulting loss of RBCCW would have isolated the same components affected on June 10. The consequences and safety implications would have been essentially the same, with no impact on the public health and safety.

Detroit Edison
2000 Second Avenue
Detroit, Michigan 48226
(313) 237-8000

July 10, 1985
NP-85-761

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

Gentlemen:

Reference: Fermi 2
NRC Docket No. 50-341
NRC Operating License No. NPF-33

Subject: Transmittal of Licensee
Event Report 85-023

Please find enclosed LER No. 85-023-00, dated July 10, 1985, for a reportable event which occurred on June 10, 1985. As indicated below, a copy of this LER is being sent to the Region III office.

If you have any questions, please contact us.

Sincerely,

R. S. Lenart
Superintendent
Nuclear Production

Enclosure: NRC Forms 366, 366A

cc: Mr. P.M. Byron
Mr. M.D. Lynch

Regional Administrator
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