

## 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 1 2		
TITLE (4) HPCI Stop Valve Oil Leak																
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 NAME(S)				DOCKET NUMBER(S)			
0 7	1 6	8 5	8 5	0 3 9	0 0 0	8 1	5 8	5					0 5 0 0 0			
OPERATING MODE (9) 2			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)													
POWER LEVEL (10) 0 1 0 1 4			20.402(b)				20.406(e)				50.73(a)(2)(iv)				72.71(b)	
			20.406(a)(1)(i)				50.38(a)(1)				X 50.73(a)(2)(v)				72.71(c)	
			20.406(a)(1)(ii)				50.38(a)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 305A)	
			20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)					
			20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)					
			20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)																
NAME L.P. Bregni, Compliance Engineer										TELEPHONE NUMBER AREA CODE 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 NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR		
YES (If yes, complete EXPECTED SUBMISSION DATE) XX NO																

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

On July 16, 1985, shortly after starting the high pressure coolant injection (HPCI) system to perform a startup test, an oil leak developed at the operator of the turbine stop valve. The leak was caused by a loose flange between the pilot valve assembly and the hydraulic cylinder of the HPCI turbine stop valve operator. The turbine was manually tripped, the flange bolts tightened, and the system restarted at about 1505 hours. During the event the plant was in Operational Condition 2 and reactor power was at 4 percent. The safety significance of this event is minimal--all other emergency core cooling systems were available, and because the oil leak was only about one gpm, the oil supply for HPCI would not have been depleted for several hours.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Fermi-2	05000341	85	-039	-000	02	OF	02

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

At 1055 hours on July 16, 1985, the high pressure coolant injection system (HPCI) was started to perform startup test DEMO.HUA.715. This is a demonstration run of the HPCI speed control governor at a nominal reactor pressure of 1000 psig. Shortly into the test at about 1058 hours, an oil leak developed at the operator of the turbine stop valve, and the turbine was manually tripped. The incident was evaluated and determined to be reportable as a condition that could have prevented the fulfillment of the safety function of the HPCI system. When this occurred the plant was in Operational Condition 2 (startup) and reactor power at 4 percent.

After the HPCI was shut down, repairs were made and the system restarted at about 1505 hours. The leak was found to be caused by a loose flange between the pilot valve assembly and the hydraulic cylinder of the HPCI turbine stop valve operator. The bolts at the flange were tightened about a quarter turn and the leak stopped.

The HPCI system has been tested previously without any evidence of an oil leak at the flange. A check of maintenance records indicates no work was performed on the valve since it was received on site. A possible explanation is that because the valve was shipped by the manufacturer as an assembly and painted, that the paint was sufficient to prevent the oil from leaking. This is supported by the fact that previous tests were conducted at lower pressure, less than 150 psig, and therefore the valve operator was subjected to lower mechanical stresses than would be experienced at higher operating pressures. Also, just prior to running the high pressure test, a steam balance chamber adjustment was made which caused the valve assembly to shake abruptly when the valve was stroked open. This may have cracked the paint or loosened the connection sufficiently to allow the oil to leak.

In addition to lubricating the bearings of the HPCI pumps and turbine, the oil pressure provides the motive force to operate the hydraulic operators of the HPCI turbine stop valve and control valve, and is used as control oil for the turbine speed control governor. The rate of oil loss from this leak was low, and is estimated to be one gpm. At that rate, an appreciable effect on system operability would not occur for several hours until the oil sump level was sufficiently depleted to cause, initially, erratic operation of the hydraulic control system and, later, failure of the hydraulic control system or loss of lubrication to the pump and turbine bearings.

The safety significance of this event is minimal since the HPCI system could have operated for several hours before the oil supply was depleted and because all other emergency core cooling systems were available.

**Detroit  
Edison**

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August 15, 1985  
NP850034

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-43

Subject: Transmittal of Licensee  
Event Report 85-039

Please find enclosed LER No. 85-039-00, dated August 15, 1985, for a reportable event which occurred on July 16, 1985. As indicated below, a copy of this LER is being sent to the Administrator Region III.

If you have any questions, please contact us.

Sincerely,

*R. S. Lenart for NRC*

R. S. Lenart  
Plant Manager

Enclosure: NRC Forms 366, 366A

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

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