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)
LaSalle County Station Unit 1	0 5 0 0 0 3 7 3	1 OF 0 3

TITLE (4)
Main Turbine Hi Vibration Trip and Reactor Scram

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 4	1 1	8 5	8 5	0 3 5	0 0	0 5	0 2	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)			
POWER LEVEL (10)	0 8 0	20.402(b)	20.405(c)	X 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
James H. Foster, extension 324	AREA CODE 8 1 5 3 5 7 - 6 7 6 1

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	I T	V T	G 0 8 0	N							

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)

At 2231 hours on April 11, 1985, Unit 1 scrammed when the main turbine tripped from a bearing #11 high vibration signal. The unit was at 80% power at the time of the event. No Emergency Core Cooling systems actuated at the time of or after the event. All systems performed satisfactorily to complete a safe shutdown of Unit 1.

After troubleshooting the main turbine vibration instrumentation system, a loose connection was discovered and repaired. It is speculated that a slight unbalance in the #11 bearing area and the #11 bearing vibration detector reading 1.5 mils high may have contributed to the turbine trip.

Currently the main turbine #11 bearing vibration detector has been disabled so an erroneous vibration signal from the #11 bearing vibration detector cannot trip the turbine. All other bearing vibration detectors for the Unit 1 main turbine are operational. An independent vibration detector is currently monitoring #11 bearing vibration.

The Unit 1 main turbine is currently operating satisfactorily with #11 bearing vibration amplitude at 6.2 mils.

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

I. EVENT DESCRIPTION

At 2231 hours on April 11, 1985, Unit 1 scrammed (JC) when the Unit 1 main turbine (TA) tripped from a high vibration signal from bearing #11. The unit was at 80% power at the time of the event. No Emergency Core Cooling systems actuated at the time of or after the event. All systems performed normally to complete a safe shutdown of Unit 1.

SRV E (SB) actuated at the time of this event. Reactor level dropped to 7 inches and reactor pressure did not exceed 1040 psig as shown by Control Room indication.

II. CAUSE

A reactor scram followed the main turbine trip from a bearing #11 high vibration signal. The setpoint for a turbine trip on bearing high vibration is 10 mils.

It is believed at this time that the #11 bearing vibration main turbine trip could have been caused by one or a combination of the following:

1. Main turbine #11 bearing vibration detector (IT) is reading high by approximately 1.5 mils when compared to a calibrated vibration detector.

2. A slight unbalance has been detected in the #11 bearing area as per Commonwealth Edison System Materials Analysis Department report dated 3/8/85 on LaSalle Unit 1 bearing #11 vibration.

3. A loose connection that connects the #11 bearing vibration detector was discovered which caused the vibration indication of the #11 bearing to be erratic. After the repair of the loose connection the vibration indication of the #11 bearing was indicating normal.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

All safety systems operated as designed. No Emergency Core Cooling systems actuated during the reactor scram following the main turbine high vibration trip.

SRV E actuated and then reclosed at the time of this occurrence. Reactor level dropped to 7 inches and reactor pressure did not exceed 1040 psig as shown by Control Room indication. SRV E normal actuation set pressure is approximately 1104 psig.

IV. CORRECTIVE ACTION

AIR 373-351-85-01307 will track the investigation of vibration related problems with the #11 bearing.

The #11 bearing vibration detector has been disconnected from the Turbine Supervisory Instrumentation trip circuit (IT) so that any further spurious high vibration indications will not erroneously trip the main turbine and subsequently scram

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

IV. CORRECTIVE ACTION (Continued)

the reactor. The #11 bearing is being constantly monitored with a separate calibrated vibration detector to supply an independent verification of vibration for the #11 bearing.

SRV E pressure switch 1B21-N039E has been replaced and calibrated to insure that the SRV E will actuate at its proper setpoint.

Unit 1 main turbine bearing #11 vibration detector loose connection has been repaired and normal vibration indication has been observed from the #11 bearing vibration recorder.

The design of the turbine trip/turbine supervisory design is being reviewed for improvements which could reduce the likelihood of spurious turbine trips. AIR 374-200-84-67189

V. PREVIOUS OCCURRENCES

The Unit 1 main turbine previously tripped in 1983 on a spurious high vibration signal from one of its bearings.

SRV (E) (SB) has previously actuated (LER 373/85-29) at a pressure lower than its setpoint of 1104 psig.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

James H. Foster, 815/357-6761, extension 324.

Commonwealth Edison
LaSalle County Nuclear Station
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May 2, 1985

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

Dear Sir:

Reportable Occurrence Report #85-035-00, Docket #050-373 is being submitted to your office in accordance with 10CFR 50.73.

R. D. Bishop
for G. J. Diederich
Station Superintendent
LaSalle County Station

GJD/MLD/kg

Enclosure

xc: NRC, Regional Director
INPO-Records Center
File/NRC

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