NRC Form 366 (9-83)

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LICENSEE EVENT REPORT (LER)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/88

FACILITY NAME (1): LaSalle County Station Unit 2

DOCKET NUMBER (2): 0 5 0 0 0 3 7 4

PAGE (3): 1 OF 0 3

TITLE (4): Scram Due to Intermediate Range Monitor "Hi-Hi" Signal Because of Cold Water Addition

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 3	0 3	8 6	8 6	0 0 5	0 0	0 3	2 6	8 6		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 2

POWER LEVEL (10): 0 0 8

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

	20.402(b)		20.405(c)
	20.405(a)(1)(i)		50.36(c)(1)
	20.405(a)(1)(ii)		50.36(c)(2)
	20.405(a)(1)(iii)		50.73(a)(2)(i)
	20.405(a)(1)(iv)		50.73(a)(2)(ii)
	20.405(a)(1)(v)		50.73(a)(2)(iii)

X	50.73(a)(2)(iv)		73.71(b)
	50.73(a)(2)(v)		73.71(c)
	50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	50.73(a)(2)(viii)(A)		
	50.73(a)(2)(viii)(B)		
	50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME: John Adamovich, Technical Staff Engineer, extension 499

TELEPHONE NUMBER: 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	S J	F C V	C 6 0 0	N							
B	S J			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)

On March 3, 1986, at 0543 hours, Unit 2 reactor scrammed (JC) due to an intermediate range monitor (IRM, IG) "Hi-Hi" signal. This event occurred while Unit 2 was shutting down for maintenance on the Reactor Water Cleanup (RWCU, CE) system.

The Intermediate Range Monitor signaled "Hi-Hi" when "cold" water was added to the reactor through a partially open feedwater regulator valve following a start of the Motor Driven Reactor Feed Pump. Since Reactor Water Cleanup was unavailable, the capability to reject reactor water was limited. The feedwater regulating valve instrumentation was the root cause of the actuation. Instrumentation sensed the valve fully closed, when actually it was 15 percent open.

The feedwater valve instrumentation was recalibrated under Work Request L56432. The Station Nuclear Engineering Department is investigating installation of a bypass line and valve around the feedwater regulating valve to ensure better reactor vessel level control.

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

I. EVENT DESCRIPTION

On March 3, 1986, at 0543 hours, Unit 2 reactor scrammed (JC) due to an Intermediate Range Monitor (IRM, IG) "Hi-Hi" signal in both "A" and "B" trip systems. This event occurred while Unit 2 was shutting down for maintenance on the Reactor Water Cleanup (RWCU, CE) system suction inboard isolation (NH) valve (2G33-F001) (LER 374/86-006-00). Unit 2 was in Operational Condition 2 (Startup) and at 8 percent power at the time of the scram.

Feedwater Control (JK) was in Single Element Auto and was performing satisfactorily prior to the scram. During a normal shutdown, Feedwater Control is maintained in this mode until low reactor power (approximately 3%) is reached. At this point it is often necessary for an Operator to control reactor water level by throttling the Feedwater Regulating Valve (FRV, SJ) manual inlet valve. This is done to achieve finer control of reactor water level because the FRV leaks by when full closed. Reactor Water Cleanup (RWCU) blowdown flow is also adjusted in conjunction with this method to provide additional control.

A Feedwater Control problem developed with reactor power at approximately 8%. The FRV was full closed but reactor level was still increasing. The problem was compounded because the RWCU inboard isolation valve, 2G33-F001, had failed in the closed position thereby isolating the cleanup system which resulted in a loss of blowdown flow to help control reactor water level. The Motor Driven Reactor Feed Pump (MDRFP, SJ) tripped once on reactor vessel high level and was restarted at approximately 20" water level. When water level approached the high level trip, the Operator manually tripped the MDRFP. On the subsequent pump startup 2 channels of the IRM range tripped on hi-hi flux resulting in the scram. An Operator was dispatched to manually control feedwater with the FRV manual inlet but there was not enough time to achieve this.

II. CAUSE

The loss of Reactor Water Cleanup contributed to the scram but the root cause was the leakage past the Feedwater Regulator Valve. The Feedwater Regulator Valve was found to be 15 percent open while the valve indicated fully closed. Valve 2FW005 did not fully close because of an instrumentation problem. There was no design or mechanical malfunction associated with the Feedwater Regulating Valve, 2FW005.

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

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The consequences of this event were minimal. This type of event can only occur at low power levels where leakage past the Feedwater Regulating Valve is not compensated by steam flow. Normally the RWCU system is available to reject water to better control reactor vessel level.

IV. CORRECTIVE ACTIONS

The Feedwater Regulating Valve instrumentation was recalibrated prior to unit startup. This was done under Work Request L56432.

The Station Nuclear Engineering Department (SNED) has been contacted to resolve the problem. They are investigating installation of a bypass line around the Feedwater Regulating Valves to ensure better level control. The work will be tracked under Action Item Record 374-200-86-02000.

V. PREVIOUS OCCURRENCES

None.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

John Adamovich, Technical Staff Engineer, extension 499.

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March 26, 1986

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

Dear Sir:

Reportable Occurrence Report #86-005-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

R. D. Bukp
for G. J. Diederich
Station Manager
LaSalle County Station

GJD/DRR/kg

Enclosure

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

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