NRC Form 366
(9-83)

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

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)
"B" VC/VE Train "A" Ammonia Detector Actuation

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 1	2 1	8 5	8 5	- 0 1 0	- 0 0	0 2	1 9	8 5	LaSalle Unit 2	0 5 0 0 0 3 7 4
										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 9 9	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
Vincent Masterson, Extension 499	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	
B	V I	D E T	M 0 2 8	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 January 21, 1985, two separate ammonia detector alarms occurred on the "A" ammonia detector (OXY-VC165A) for the "B" Control Room Ventilation/Auxiliary Electric Equipment Room Ventilation system (VC/VE; VI/VE). No ammonia concentrations existed at the time of these occurrences. Each alarm resulted in an Engineered Safety Feature (ESF) actuation consisting of the "B" VC/VE ventilation trains becoming aligned for charcoal filter train (odor eater) OVC01FB/OVE01FB operation and recirculation ventilation line-up.

The cause for the alarm was due to freezing ambient temperatures around the detector resulting from snow build-up problems on the Turbine Building Ventilation and Reactor Building Ventilation systems.

A Modification, M-1-0-84-33, is in progress to re-design the supply air intake of these ventilation systems to eliminate abnormal configurations. This modification will also correct the freezing problem affecting detector operation.

The ammonia detector is manufactured by MDA Scientific, Inc.

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

I. EVENT DESCRIPTION

On January 21, 1985, two separate ammonia detector alarms occurred on the "A" ammonia detector (OXY-VC165A) for the "B" Control Room Ventilation/Auxiliary Electric Equipment Room Ventilation system (VC/VE; VI/VE). The first alarm occurred at 1331 which was reset at 1400. A second alarm was received later at 1517 and was subsequently reset at 1625. No abnormal ammonia concentrations existed at the time of these occurrences. Each alarm resulted in an Engineered Safety Feature (ESF) actuation consisting of the "B" VC/VE ventilation trains becoming aligned for charcoal filter train (odor eater) OVC01FB/OVE01FB operation and recirculation ventilation line-up.

Instrument Maintenance personnel were notified to investigate the cause of the occurrence.

II. CAUSE

The cause for the ammonia detector alarms appears to be due to snow and below freezing air temperatures in the immediate vicinity of the "A" ammonia detector, OXY-VC165A. This is an abnormal condition which existed because excessive snow build-up on the Turbine Building ventilation and Reactor Building ventilation intake filters necessitated the opening of filter train doors. This in turn allowed the immediate area of the ammonia detector to reach below freezing temperatures resulting in spurious alarms of the detector. The detector, OXY-VC165A, is only 3 feet away from the ventilation door.

The manufacturer's recommendation on the lower temperature limit for the ammonia detector requires it to be above 28°F.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

At the time of the occurrence both Unit 1 and Unit 2 were in Operational Condition 1 (Run) with reactor power at 86% and 98% respectively.

The "A" VC/VE ventilation train was in operation at the time of the occurrence. The "A" VC/VE train was not affected by the "B" VC/VE ventilation train "A" ammonia detector trip. The result of the detector trip was the alignment of dampers on the secured "B" VC/VE ventilation train for charcoal filter train (odor eater) operation and for Recirculation Mode.

IV. CORRECTIVE ACTION

The ammonia detector alarm occurring at 1331, was investigated by Instrument Maintenance personnel and was determined to be caused by freezing temperatures in the vicinity of the detector. Plastic sheeting was then installed around the detector to minimize moisture build-up inside the detector cabinet. The ammonia detector alarmed again at 1517. Upon investigation of the second alarm it was determined that parts of the plastic sheeting had shifted allowing freezing air to reach the cabinet once again. The plastic was repositioned with no further recurrences.

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

IV. CORRECTIVE ACTION (Continued)

The problem of snow build-up on the Turbine Building ventilation (VT) and Reactor Building ventilation (VR) are the root cause for the below normal temperatures influencing the ammonia detectors. Temporary heaters installed in the area do not solve the problem. Encasing the detectors in plastic sheeting appears to help but this is a temporary fix only.

Currently Modification M-1-0-84-33 is in progress to design a new supply air intake for the "VT" and "VR" ventilation systems that will prevent the snow build-up problem. Once this modification is completed, the detector freezing issue should be solved.

The ammonia detector is manufactured by MDA Scientific Company.

V. PREVIOUS OCCURRENCES

LER 373/84-017

VI. NAME AND TELEPHONE NUMBER OF PREPARER

Vincent Masterson, 815/357-6761, extension 499.

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Marseilles, Illinois 61341
Telephone 815/357-6761

February 19, 1985

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

Dear Sir:

Reportable Occurrence Report #85-010-00, Docket #050-373 is being submitted to your office in accordance with 10CFR 50.73.

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

GJD/MLD/kg

Enclosure

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

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