

LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

1 1 1 L L S C 1 2 0 0 - 1 0 0 0 0 0 - 0 0 3 4 1 0 0 0 4 5
8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 31 CAT 38
OVT
1 1 5 0 5 0 0 0 3 7 3 7 0 4 1 2 8 3 2 0 5 1 0 8 3 9
8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

On April 12, 1983, after completion of LIS-PR-04, it was discovered that the stack

WRGM Mid Range noble gas recorder OD18-R521 was producing unusual readings. The

instrument was declared inoperative. Action statement of Technical Specification

3.3.7.5 was put into effect. Because the other 2 remaining ranges, the low and High

range were functioning properly adequate monitoring capability was maintained.

The safety of plant personnel and general public was maintained

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE
M C 11 E 12 E 13 I N S T R U 14 R 15 Z 16
9 10 11 12 13 18 19 20
17 LER/RO REPORT NUMBER 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
8 3 0 4 0 0 3 L 0
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRC-A FORM SUBL PRIME COMP. SUPPLIER COMPONENT MANUFACTURER
X 18 F 19 Z 20 Z 21 0 0 0 0 Y 23 N 24 A 25 G 0 6 3 26
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

The cause of the recorder malfunction appears to be electronic noise. After trouble-
shooting by substituting power supplies the problem corrected itself. The original
power supply was re-installed in the midrange recorder. The previous problem that
existed could not be duplicated and did not occur again. Work Request (L23922) was
completed on April 13, 1983.

FACILITY STATUS % POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION
B 28 0 1 4 29 NA A 31 Observation
9 10 12 13 44 45 46 80
ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE
Z 33 Z 34 NA 35 36
9 10 11 44 45 80
PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION
0 0 0 37 Z 38 NA 39
9 10 11 12 13 80
PERSONNEL INJURIES NUMBER DESCRIPTION
0 0 0 40 NA 41
9 10 11 12 80
LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION
Z 42 NA 43
9 10 11 12 80
PUBLICATION ISSUED DESCRIPTION
N 44 NA 45
9 10 11 12 80

8305240381 830510
PDR ADOCK 05000373
S PDR

NRC USE ONLY

NAME OF PREPARER

Vincent Foster

PHONE

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FE 225

- I. LER NUMBER: 83-040/03L-0
- II. LASALLE COUNTY STATION: Unit 1
- III. DOCKET NUMBER: 050-373
- IV. EVENT DESCRIPTION:

On April 12, 1983, after completion of LaSalle Instrument Surveillance (LIS-PR-04), Main Stack Wide Range Gas Monitor Functional Test; it was discovered that the stack WRGM Mid-Range Noble Gas Recorder (0D18-R521) was producing unusual and peculiar readings. The instrument was declared inoperative and a Work Request submitted. Action Statement of Technical Specification 3.3.7.5 was put into effect.

V. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

The Stack Wide Range Gas Monitor Noble Gas Recorder has three scales; Low, Mid-Range, and High. Each of the scales are 6 decade logarithmic. The ranges of the scales are as follows:

Low, $10^{-7} - 10^{-1} \text{ uc/cm}^3$, Mid-Range, $10^{-4} - 10^2 \text{ uc/cm}^3$, and High, $10^{-1} - 10^5 \text{ uc/cm}^3$. The ranges provide an electronic overlap of 3 decades between low range to mid-range and mid-range to high-range.

There are 2 sample paths, the low-range detection sample path and the mid/high-range detection sample path. Both paths receive input flow samples that are collected through isokinetic probes located in the plant vent stack. Each path functions in the same manner. The input sample enters the WRGM through the sample conditioning skid and from there is directed to the sampling detection skid. In the low-range sample path, the sample passes through an RD-52 detector.

In the mid/high-range sample path, the sample passes first through the mid-range detector (lower RD-72) and then through the high-range detector (top RD-72). Both sample paths are connected together on the sample detection skid for return to the stack.

During normal operation the low-range pump and mid/high-range pump are in auto. These 2 pumps provide sample flow for their respective detectors. The low-range pump is always on during normal operation. The mid/high-range pump turns on at $5 \times 10^{-2} \text{ uc/cm}^3$ being sensed on the low-range.

What occurred on April 12, 1983, was that the mid-range circuitry was producing a steady pattern of spikes on the mid-range recorder. The low range recorder at the time of the occurrence was verified to be reading correctly substantiated by grab samples taken by the Rad/Chem Department.

Because both the low-range recorder and high-range recorder were functioning properly, adequate plant monitoring capability was maintained.

VI. CAUSE:

The cause for the mid-range exhibiting the steady pattern of spikes appears to be electronic noise. The Wide Range Gas Monitor is very sensitive to electronic noise and has been noted to respond to radio transmission, auto flow control valve movement and other electrical equipment in the area as documented in DVR 1-1-82-270.

VII. CORRECTIVE ACTION:

Work Request (L23922) was written and Instrument Maintenance Personnel were called in to troubleshoot the problem.

To try and isolate the problem, power supplies for the midrange recorder and high-range recorder were swapped. These 2 ranges use identical power supplies. The substitution corrected the problem on the midrange recorder, with the high-range recorder also functioning properly. Power supplies were once again swapped back to their original recorders. The problem did not return. A reason for the midrange recorder returning to proper operation could not be established. The BNC cable connection between the power supply and recorder appears as a common factor but this was verified to be properly made up earlier.

The problem appears to have been caused by electronic noise since the problem has occurred earlier as documented in DVR 1-1-82-270.

Modification (M-1-0-82-107) for field changes #032 and #034, is designed to correct this problem by the installation of additional noise suppression for electronic noise caused by sample pump starts and solenoid valve operation during sampling and purging of the detection skid. The modification is currently awaiting parts and implementation by General Atomics Technology.

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May 11, 1983

James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Sir:

Reportable Occurrence Report #83-040/03L-0 Docket #050-373 is being submitted to your office in accordance with LaSalle County Nuclear Power Station Technical Specification 6.6.B.2.(b), conditions leading to operation in a degraded mode permitted by a limiting condition for operation or plant shutdown required by a limiting condition for operation.

G. J. Diederich
Superintendent
LaSalle County Station

GJD/GW/sjc

Enclosure

cc: Director of Inspection & Enforcement
Director of Management Information & Program Control
U. S. NRC Document Management Branch
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