NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | N C B E P 1 (2) | 0 0 - 0 0 0 0 - 0 0 (3) | 4 1 1 1 1 (4) | (5)
7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T
01 | REPORT SOURCE L (6) | 0 5 0 - 0 3 2 5 (7) | 0 1 1 5 8 2 (8) | 0 2 1 2 8 2 (9)
7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | During plant operation, routine surveillance revealed that Post-Accident Iodine Detec-
03 | tion instrument, 1-CAC-AQH-1260-2, was indicating downscale. At the time, redundant
04 | instrument, 1-CAC-AQH-1262-2, was already inoperable also due to downscale indications.
05 | As a result, the T.S. minimum number of operable post-accident iodine detector
06 | channels was not met. However, the remaining redundant instrument, 1-CAC-AQH-1261-1,
07 | was operable and was showing expected indications. This event did not affect the
08 | health and safety of the public. Technical Specifications 3.3.5.3, 6.9.1.9b
7 8 9 80

09 | SYSTEM CODE I E (11) | CAUSE CODE E (12) | CAUSE SUBCODE G (13) | COMPONENT CODE I N S T R U (14) | COMP. SUBCODE Y (15) | VALVE SUBCODE Z (16)
7 8 9 10 11 12 13 18 19 20

(17) LER/RO REPORT NUMBER | EVENT YEAR 8 2 | — | SEQUENTIAL REPORT NO. 0 0 8 | / | OCCURRENCE CODE 0 3 | REPORT TYPE L | — | REVISION NO. 0
21 22 23 24 26 27 28 29 30 31 32

ACTION TAKEN B (18) | FUTURE ACTION X (19) | EFFECT ON PLANT Z (20) | SHUTDOWN METHOD Z (21) | HOURS (22) 0 0 0 0 | ATTACHMENT SUBMITTED Y (23) | NPRD-4 FORM SUB. Y (24) | PRIME COMP. SUPPLIER N (25) | COMPONENT MANUFACTURER N 3 0 5 (26)
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | The 1260-2 photomultiplier's transistor and field effect transistor (FET) had failed,
11 | causing the instrument to indicate downscale. Failed resistors in the photomulti-
12 | plier amplifier and a bad photomultiplier tube caused the 1262-2 instrument to indicate
13 | downscale. The 1260-2 transistor and FET were replaced, the 1262-2 resistors and
14 | photomultiplier tube was replaced and both instruments, Model No. S2-2-2S, were
7 8 9 returned to service. 80

15 | FACILITY STATUS E (28) | % POWER 0 9 9 (29) | OTHER STATUS (30) NA | METHOD OF DISCOVERY A (31) | DISCOVERY DESCRIPTION (32) Operator Surveillance
7 8 9 10 12 13 44 45 46 80

16 | ACTIVITY RELEASED Z (33) | CONTENT OF RELEASE Z (34) | AMOUNT OF ACTIVITY (35) NA | LOCATION OF RELEASE (36) NA
7 8 9 10 11 44 45 80

PERSONNEL EXPOSURES
17 | NUMBER 0 0 0 (37) | TYPE Z (38) | DESCRIPTION (39) NA
7 8 9 11 12 13 80

PERSONNEL INJURIES
18 | NUMBER 0 0 0 (40) | DESCRIPTION (41) NA
7 8 9 11 12 80

LOSS OF OR DAMAGE TO FACILITY (43)
19 | TYPE Z (42) | DESCRIPTION NA
7 8 9 10 80

PUBLICITY
20 | ISSUED N (44) | DESCRIPTION (45)
7 8 9 10 68 69 80

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PDR ADOCK 05000325
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NRC USE ONLY

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GPO 917-926

LER ATTACHMENT - RO #1-82-8

Facility: BSEP Unit No. 1 Event Date: 1-15-82

During plant operation, routine operator surveillance revealed that post-accident iodine detection instrument, 1-CAC-AQH-1260-2, was indicating downscale. At the time of the discovery, redundant instrument, 1-CAC-AQH-1262-2, was also inoperable due to downscale indications. The inoperability of these instruments, Nuclear Measurements Corporation Model No. S2-2-2S, resulted in a failure to meet the technical specification minimum number of operable channels for post-accident iodine detection monitoring. During this event, the remaining redundant instrument, 1-CAC-AQH-1261-1 was operable and was showing normally expected indications.

The investigation of the 1260-2 indication problem revealed that a failed transistor and a field effect transistor (FET) in the instrument's photomultiplier circuitry had resulted in the instrument indicating downscale. An examination of the 1260-2 FET concluded the most probable cause of its failure was the relatively high moisture content in the sample flow seen by the instrument which affects components in the instrument's sample chamber.

The 1260-2 failed transistor and FET were replaced and following a calibration of the 1260-2 instrumentation, it was returned to service.

The 1262-2 instrument was indicating downscale due to several failed resistors in the amplifier circuitry, attributed to component end of life, combined with a low response by the photomultiplier tube caused by high moisture. The failed resistors and photomultiplier tube were replaced and the 1262-2 was calibrated and returned to service.

Due to recently encountered moisture-related problems with these specific type post-accident monitors, an Engineering Work Request has been submitted to investigate and evaluate the moisture problems. Based on the results of the engineering evaluation, a decision will be made as to what modifications, if any, can be made to eliminate the problems.