

CONTROL BLOCK:

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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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|---------------|---|---|---|---|---|---|----|----------------|---|---|---|---|---|---|---|---|---|---|----|--------------|---|---|---|---|----|---|----|-----|----|
| 0 | 1 | N | J | S | G | S | 1 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | | | 5 |
| 7 | 8 | 9 | | | | | 14 | 15 | | | | | | | | | | | 25 | 26 | | | | | 30 | | 57 | CAT | 58 |
| LICENSEE CODE | | | | | | | | LICENSE NUMBER | | | | | | | | | | | | LICENSE TYPE | | | | | | | | | |

CON'T

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---------------|----|----|----|----|----|----|----|----|----|---------------|----|----|----|----|----|----|----|----|----|------------|---|---|---|---|--|--|--|--|--|-------------|--|--|--|--|--|--|--|--|--|
| 0 | 1 | REPORT SOURCE | | | | | | | | | | DOCKET NUMBER | | | | | | | | | | EVENT DATE | | | | | | | | | | REPORT DATE | | | | | | | | | |
| 7 | 8 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | | | | | | | | | | | | | | | | | | | |
| | | L | 6 | 0 | 5 | 0 | 0 | 0 | 2 | 7 | 2 | 7 | 0 | 5 | 2 | 5 | 8 | 3 | 8 | 0 | 6 | 0 | 8 | 8 | 3 | 9 | | | | | | | | | | | | | | | |

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

On May 25, 1983, during routine power operation, the Control Room Operator discovered that the Containment Air Particulate Monitor indicated an alarm condition. No purge/pressure relief isolation function was received, however, and Limiting Condition for Operation 3.3.3.1 Action 20 was entered. Redundant containment radiation monitoring channels and Reactor Coolant System leakage detection systems were operable. Purge/pressure relief operations were suspended and a grab sample of the containment atmosphere was taken. The event constituted operation in a degraded mode in accordance with Technical Specification 6.9.1.9b.

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|----|----------------------|----|----------------------|-----------------|--------------------------------|----|------------------------|----|---------------------------|-------------------------------|-----------------------|----|---------------------------|----|-----------------------------------|----|--------------------|----|----|--------------------|--|----|
| 0 9 | | SYSTEM CODE B B | | 11 | CAUSE CODE A | | 12 | CAUSE SUBCODE C | | 13 | COMPONENT CODE R E L A Y X | | | | | | 14 | COMP. SUBCODE C | | 15 | VALVE SUBCODE Z | | 16 |
| 7 | 8 | 9 | 10 | | 11 | | 12 | | 13 | | 14 | 15 | 16 | 17 | 18 | 19 | 20 | | 21 | 22 | | | |
| 17 | | LER RO REPORT NUMBER | | EVENT YEAR 8 3 | | SEQUENTIAL REPORT NO. 0 2 5 | | OCCURRENCE CODE 0 3 | | REPORT TYPE L | | REVISION NO. 0 | | | | | | | | | | | |
| ACTION TAKEN E | | FUTURE ACTION H | | EFFECT ON PLANT Z | | SHUTDOWN METHOD Z | | HOURS 0 0 0 0 | | ATTACHMENT SUBMITTED Y | | NPRD-4 FORM SUB. N | | PRIME COMP. SUPPLIER A | | COMPONENT MANUFACTURER L 1 8 5 | | | | | | | |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | | | |

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Investigation revealed that the channel output alarm relay wire bail was not in place

1 1 and the relay was loose in its socket. The relay was reinserted and properly

1 2 constrained. The channel isolation function was satisfactorily tested and the action

1 3 statement was terminated. All other RMS channel relays were inspected, and repaired.

1 4 Personnel were counseled concerning proper bail installation.

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|-----------------|---|---|---------|----|----|--------------|------|-----|------|---------------------|------|----------------------|-----------------------|----|----|------|
| 7 | 8 | 9 | | | | | | | | | | | 80 | | | |
| FACILITY STATUS | | | % POWER | | | OTHER STATUS | | | (30) | METHOD OF DISCOVERY | | | DISCOVERY DESCRIPTION | | | (32) |
| 1 | 5 | E | (28) | 0 | 8 | 3 | (29) | N/A | | | (31) | Operator Observation | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |

ACTIVITY CONTENT
RELEASED OF RELEASE AMOUNT OF ACTIVITY (35) LOCATION OF RELEASE (36)

1 6 Z (33) Z (34) N/A N/A

7 8 9 10 11 44 45 80

| PERSONNEL EXPOSURES | | | | | | | | | |
|---------------------|---|---|------|---|------------------|---|------|-----|--|
| NUMBER | | | TYPE | | DESCRIPTION (39) | | | | |
| 1 | 7 | 0 | 0 | 0 | (37) | Z | (38) | N/A | |

| 7 | 8 | 9 | 11 | 12 | 13 | 80 |
|--------------------|---|-------------|----|----|----|------|
| PERSONNEL INJURIES | | | | | | |
| NUMBER | | DESCRIPTION | | | | (41) |

7 8 9 11 12 N/A
LOSS OF OR DAMAGE TO FACILITY (43)
TYPE DESCRIPTION
8306270269 830614
PDR ADOCK 05000272 80

| TYPE | | DESCRIPTION | | S | | PDR | |
|------|---|-------------|----|-----|--|-----|--|
| 1 | 9 | Z | 42 | N/A | | | |

| ISSUED | | PUBLICATION | DESCRIPTION | NRC USE ONLY |
|--------|---|-------------|-------------|--------------|
| 2 | 0 | N | (44) N/A | |

NRC USE ONLY

NAME OF PREPARER R. Frahm

PHONE: (609) 935-6000 Ext. 4309



Public Service Electric and Gas Company P.O. Box E Hancocks Bridge, New Jersey 08038

Salem Generating Station

June 14, 1983

Mr. J. Allan
Acting Regional Administrator
USNRC
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Allan

LICENSE NO. DPR-70
DOCKET NO. 50-272
REPORTABLE OCCURRENCE 83-025/03L

Pursuant to the requirements of Salem Generating Station Unit No. 1, Technical Specifications, Section 6.9.1.9.b, we are submitting Licensee Event Report for Reportable Occurrence 83-025/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. M. Zupko, Jr.", is written above the typed name.

J. M. Zupko, Jr.
General Manager -
Salem Operations

RF:ks

CC: Distribution

IE22
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Report Number: 83-025/03L

Report Date: 06-08-83

Occurrence Date: 05-25-83

Facility: Salem Generating Station Unit 1
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Radiation Monitoring Instrumentation - Containment Air Particulate Monitor - Inoperable.

This report was initiated by Incident Report 83-100.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 83% - Unit Load 900 MWe.

DESCRIPTION OF OCCURRENCE:

At 0710 hours, May 25, 1983, during routine power operation, the Control Room Operator discovered that the Containment Air Particulate Monitor (Channel 1R11A) indicated an alarm condition (approximately 100K cpm). A containment purge/pressure relief isolation function was not received, however. The monitor was declared inoperable and Technical Specification Limiting Condition for Operation 3.3.3.1 Action 20 was entered (Action 22 did not apply since Channels 1R41A,B and C were operable and available with reduced setpoints to provide the purge/pressure relief isolation function).

Redundant containment radiation monitoring channels and Reactor Coolant System (RCS) leakage detection systems were operable; no other indication of RCS leakage existed. Containment purge and pressure relief operations were suspended. A grab sample of the containment atmosphere was immediately taken and showed no significant activity was present.

An immediate investigation of the problem for reportability revealed that the purge/pressure relief function requirements of Limiting Condition for Operation 3.3.3.1 Action 22 were not consistent with those of Limiting Condition for Operation 3.3.2.1 Action 15. Based on an initial review of the Technical Specification bases and system safety functions, it was concluded that the requirements of Technical Specification Section 3.3.2.1 were correct, and those of Section 3.3.3.1 were more limiting than required.

APPARENT CAUSE OF OCCURRENCE:

Investigation of the problem revealed that the channel detector had been contaminated, resulting in an indication of increased radioactivity levels. The channel output alarm relay wire bail was not in place and the relay was loose in its socket. The relay was reinserted into its socket, and the channel containment isolation

APPARENT CAUSE OF OCCURRENCE: (cont'd)

function was satisfactorily tested 10 times.

The relay may have been dislodged during the course of routine channel maintenance, the loose condition going unnoticed following completion of the work. Wire bails might also spring out of place due to normal panel vibration following improper positioning of the bail. In either case, the problem was assumed to be relatively isolated in nature.

A review of the Technical Specifications revealed that Section 3.3.3.1, which outlines the general radiation monitoring instrumentation requirements, requires closing the purge/pressure relief isolation valves in the event one of the containment monitoring channels is inoperable. Section 3.3.2.1, which specifically covers the Engineered Safety Feature Actuation System (including the purge/pressure relief isolation function) allows maintaining the valves open with one out of the three containment radioactivity monitoring channels inoperable.

No coincidence feature is included in the purge/pressure relief isolation function, and the Containment Isolation signal also closes the purge/pressure relief isolation valves. Safety significant releases of radioactivity are likely to include particulate, gaseous and iodine radioactivity. It was therefore assumed the requirements of Section 3.3.3.1 were inaccurate.

Inoperability of a containment monitor is usually discovered at the time of failure, and the Plant Vent Monitor Channels 1R41A,B and C are available to meet Technical Specification requirements for purge/pressure relief isolation. In the few instances where the isolation function requirements had applied, the purge/pressure relief valves had been maintained closed in compliance with the action statements. The discrepancy between the two sections was therefore not noted until this time, when a potential violation of the specifications prompted detailed investigation of both sets of requirements.

ANALYSIS OF OCCURRENCE:

Operability of the containment air particulate monitor insures that the levels of airborne particulate radioactivity in the containment atmosphere are continually measured. The channel also functions as an RCS leak detection system and, along with the other containment radioactivity monitors, automatically isolates the purge/pressure relief path in the event of high radioactivity levels.

As noted, the redundant RCS leak detection systems and purge/pressure relief channels were operable, and radioactivity levels in the containment atmosphere were continuously monitored by the containment gaseous activity and iodine monitors. The event therefore involved no risk to the health and safety of the public or adverse environmental impact. Due to the loss of redundancy, the event constituted operation in a degraded mode in accordance with a limiting condition for operation. The occurrence is reportable in accordance with Technical Specification 6.9.1.9b.

ANALYSIS OF OCCURRENCE: (cont'd)

Limiting Condition for Operation 3.3.3.1 Action 20 requires:

With one of the RCS leak detection systems inoperable, operation may continue for up to thirty days, provided that grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours, when the required gaseous and/or particulate radioactivity monitoring system is inoperable; otherwise be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

CORRECTIVE ACTION:

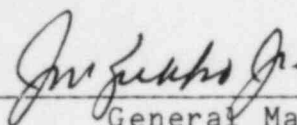
As noted, a grab sample of the containment atmosphere was obtained, in compliance with the action statement. The channel detector and housing were decontaminated and the indication returned to normal. As mentioned, the output alarm relay was fully inserted and the purge/pressure relief function was satisfactorily tested. At 1437 hours, May 25, 1983, Limiting Condition for Operation 3.3.3.1 Action 20 was terminated.

All radiation monitoring channels were inspected for loose relays or out-of-place bails; one relay bail was found out-of-place and was repositioned. Personnel performing maintenance on the radiation monitoring channels were counseled concerning the possible adverse impact of a loosened relay module or out-of-place bail. Finally, a review of the Technical Specifications will be performed to identify the proper requirements for the purge/pressure relief function, and a License Change Request will be submitted as appropriate.

FAILURE DATA:

LFE Corp.
Log Ratemeter
Model AR-2

Prepared By R. Frahm



General Manager -
Salem Operations

SORC Meeting No. 83-077