

## LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T

0 1 REPORT SOURCE L 6 0 5 0 0 0 2 7 2 7 1 0 3 1 8 3 8 1 1 3 0 8 3 9  
7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

0 2 On October 31, 1983, the 130' Elevation Air Lock interior door failed the surveillance  
0 3 test. The air lock was declared inoperable and Action Statement 3.6.1.3 was entered.  
0 4 The exterior door was operable throughout the occurrence. The air lock was restored  
0 5 to operation within the time specified by the action requirement; no undue risk to the  
0 6 health or safety of the public was involved. The event constituted operation in a  
0 7 degraded mode permitted by a limiting condition for operation and is reportable in  
0 8 accordance with Technical Specification 6.9.1.9b.

0 9 SYSTEM CODE S A 11 CAUSE CODE A 12 CAUSE SUBCODE B 13 COMPONENT CODE P E N E T R 14 COMP. SUBCODE A 15 VALVE SUBCODE Z 16  
7 8 9 10 11 12 13 14 15 16  
17 LER RO REPORT NUMBER 8 3 21 22 0 5 0 23 24 0 3 25 26 L 27 28 0 29 30 31 0 32  
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
ACTION TAKEN X 18 FUTURE ACTION H 19 EFFECT ON PLANT Z 20 SHUTDOWN METHOD Z 21 HOURS 0 0 0 0 22 ATTACHMENT SUBMITTED Y 23 NPRD-4 FORM SUB. N 24 PRIME COMP. SUPPLIER A 25 COMPONENT MANUFACTURER C 3 1 0 26  
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

1 0 The seal was not seated properly; repairs were effected, the air lock tested with  
1 1 satisfactory results and Action Statement 3.6.1.3 was terminated at 1025 hours,  
1 2 October 31, 1983. Training will be conducted for personnel in the proper operation of  
1 3 the air locks during normal use and during surveillance testing.

1 4 FACILITY STATUS E 28 % POWER 1 0 0 29 OTHER STATUS N/A 30 METHOD OF DISCOVERY B 31 DISCOVERY DESCRIPTION Routine Surveillance 32  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
1 5 ACTIVITY CONTENT RELEASED OF RELEASE Z 33 Z 34 AMOUNT OF ACTIVITY N/A 35 LOCATION OF RELEASE N/A 36  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
1 6 PERSONNEL EXPOSURES NUMBER 0 0 0 37 TYPE Z 38 DESCRIPTION N/A 39  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
1 7 PERSONNEL INJURIES NUMBER 0 0 0 40 DESCRIPTION N/A 41  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
1 8 LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION N/A 43  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
1 9 PUBLICITY ISSUED N 44 DESCRIPTION N/A 45  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

8312130195 831130  
PDR ADOCK 05000272  
S PDR

NAME OF PREPARER

J. L. Rupp

PHONE (609) 339-4309

NRC USE ONLY

Report Number: 83-050/03L

Report Date: 11-30-83

Occurrence Date: 10-31-83

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

IDENTIFICATION OF OCCURRENCE:

Containment Systems - 130' El. Containment Air Lock - Inoperable.

This report was initiated by Incident Report 83-193

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 100 % - Unit Load 1147 MWe.

DESCRIPTION OF OCCURRENCE:

At 0430 hours, October 31, 1983, during normal power operation, while performing routine air lock testing surveillance, the equipment operator observed that the 130' Elevation Air Lock exterior door seal pressure could not be raised greater than 26 psig and that the total air flow was reading 100%. Minimum air pressure required for testing the air lock is 47 psig and since total air flow indicated a leaking seal, the air lock was declared inoperable and Technical Specification Action Statement 3.6.1.3 was entered.

APPARENT CAUSE OF OCCURRENCE:

Upon investigation, it was discovered that when seal flow was stopped to the interior door that the exterior door seal pressure increased to the required 47 psig and total air flow reduced to zero as required. This indicated proper functioning of the exterior door seal and possible malfunctioning of the interior door seal. Subsequent investigation confirmed these suspicions; the outer seal on the interior door was found to be not seated properly in the groove.

Problems with seal leakage have been previously documented, and can in most instances be attributed to one of the following:

- a. Improper operation of the air lock during normal use,
- b. Improper operation of the air lock during routine testing, and
- c. Performance of air lock testing with 47 psig test pressure.

Explanation: a. Swinging the door too rapidly results in the knife edges striking the seals, moving them out of proper position.

- b. Pressurizing or bleeding off the test pressure too rapidly can cause the seals to move out of their proper position.

APPARENT CAUSE OF OCCURRENCE: (cont'd)

- c. Testing with 47 psig (as presently required) is an excessive test pressure which aggravates the problem of unseating the seals during the testing process.

In all cases, the result is uneven seating of the knife edges, causing the seals to exhibit excessive leakage during subsequent testing.

ANALYSIS OF OCCURRENCE:

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on containment integrity and containment leak rate. Surveillance testing of air lock seals provide assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

Action Statement 3.6.1.3 requires:

With an air lock inoperable, restore the air lock to operable status within 24 hours or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

Each door contains two seals. The test pressure is applied between the seals to ensure that there is not excessive leakage due to seal damage. Under actual emergency conditions with a pressure inside of the containment, the pressure against the door tends to seat the knife edges into the seals. Although the air lock door failed to meet the existing testing requirements, the seal was not damaged and the door would likely have provided a barrier during accident conditions. One door was maintained in an operable status throughout the occurrence, and the inoperable air lock was returned to an operable status within the time specified by the action requirement. No undue risk to the health or safety of the public was therefore involved in this occurrence. This event constituted operation in a degraded mode permitted by a limiting condition for operation and is therefore reportable in accordance with Technical Specification 6.9.1.9b.

CORRECTIVE ACTION:

The outer seal on the interior door was properly aligned in its groove, the air lock was retested with both doors exhibiting satisfactory leakage rates, the air lock was declared operable and Action Statement 3.6.1.3 was terminated at 1025 hours, October 31, 1983.

A major undertaking is presently in progress to improve operation in this area.

1. A review was conducted to more clearly identify department responsibilities for operation and testing of the air locks, and appropriate changes were made to administrative and procedural controls.

CORRECTIVE ACTION: (cont'd)

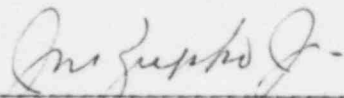
2. As identified by Unit-2 LER 83-034/03L, a training program which includes a video tape is under development and training will be conducted for radiation workers on the subject of proper operation and use of the air locks.
3. As identified by Unit-1 LER 83-044/03L, training is being conducted for operations personnel in the proper operation and performance of the air lock testing surveillance.
4. Finally, since testing of the air locks with 47 psig does not closely simulate actual seal performance, a License Change Request has been submitted to lower the test pressure to a more reasonable value.

FAILURE DATA:

Chicago Bridge and Iron Co.  
Personnel Air Lock  
Door Seal

Prepared By J. Rupp

SORC Meeting No. 83-144B

  
\_\_\_\_\_  
General Manager -  
Salem Operations



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

Salem Generating Station

November 30, 1983

Dr. Thomas E. Murley  
Regional Administrator  
USNRC  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Dear Dr. Murley:

LICENSE NO. DPR-70  
DOCKET NO. 50-272  
REPORTABLE OCCURRENCE 83-050/03L

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 83-050/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

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

JR:k11

CC: Distribution

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