

(609) 935-6000 Ext. 4309



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

Salem Generating Station

August 11, 1983

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

Dear Dr. Murley:

LICENSE NO. DPR-75
DOCKET NO. 50-311
REPORTABLE OCCURRENCE 83-034/03L

This letter is to clarify previously submitted Unit 2
Licensee Event Report 83-034/03L. The revised report
is attached.

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:k11

CC: Distribution

IE22
11

Report Number: 83-034/03L
Report Date: 07-20-83
Occurrence Date: 07-08-83
Facility: Salem Generating Station Unit 2
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

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

This report was initiated by Incident Report 83-120.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 3 - Rx Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

At 0545 hours, July 8, 1983, during a routine startup following refueling, surveillance testing revealed excessive leakage past the seals of the inner door of the 130 ft. El. Containment Air Lock. The associated air lock was declared inoperable and Technical Specification Action Statement 3.6.1.3a was entered. Due to confusion over which air lock was inoperable, however, the 130 ft. El. Air Lock continued to be used for routine containment access until 1255 hours, when the door was repaired, and the air lock satisfactorily passed the surveillance. The outer door remained operable throughout the occurrence; the plant was in hot standby at the time of the occurrence.

APPARENT CAUSE OF OCCURRENCE:

Problems with seal leakage have been previously noted and are apparently due to improper operation of the air lock. Swinging the door too rapidly results in the knife edges striking the seals, moving them out of proper position. The resulting uneven seating of the knife edges causes the seals to exhibit excessive leakage during subsequent testing. Operating the door latch mechanism too rapidly or leaving the test air aligned to the seal may result in a differential pressure across the seals which can push a seal out of its seating groove. Subsequent closing of the door may result in damage to the seals. Testing with 47 psig (as presently performed) does not closely simulate actual seal performance; a License Change Request has been submitted to lower the pressure to a more reasonable value. Finally, a cracked roller was found on the door operating linkage. Cracking of rollers has been previously noted and is attributed to operating the door linkage too rapidly, causing the cams to strike the rollers with excessive impact.

The 100 ft. El. Air Lock was tagged closed on July 6, due to failed gears in the transfer case inside the air lock, preventing operation of the outside door from that location. The tags remained in place

APPARENT CAUSE OF OCCURRENCE: (cont'd)

until July 8 when the other air lock problems were encountered. At that time, access to containment was still required and the decision was made to allow personnel to utilize the 100 ft. El. Air Lock (the air lock was still operable in terms of meeting its design requirements).

Since several shifts had passed since the tags were placed and this was not a common method of controlling access, the operating shift on duty at the time of the occurrence was not aware that the 100 ft. El. Air Lock was still tagged out. Although accepted practice for the control of access involved notification of the security and radiation protection departments that an air lock was inoperable, the tags created confusion as to which air lock was to be used. Personnel entering the containment checked in with the shift, but in accordance with accepted practice, would not be instructed as to which air lock to use.

ANALYSIS OF OCCURRENCE:

The limitations on closure 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 3.6.1.3a requires:

With one containment air lock door inoperable:

1. Maintain at least the operable air lock door closed and either restore the inoperable air lock door to operable status within 24 hours or lock the operable door closed.
2. Operation may then continue until performance of the next required overall air lock leakage test provided that the operable air lock door is verified to be locked closed at least once per 31 days.
3. Otherwise, be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

As noted, the plant was already in hot standby, the air lock was returned to an operable status in a timely fashion, and one door was maintained operable at all times. No undue risk to the health or safety of the public was therefore involved in the occurrence. The event constituted operation in a degraded mode permitted by a limiting condition for operation, and is reportable in accordance with Technical Specification 6.9.1.9b.

CORRECTIVE ACTION:

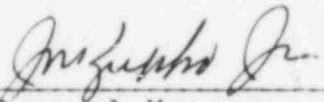
The seals and the cracked roller on the 130 ft. El. Air Lock inner door were replaced, the air lock was satisfactorily tested. The air lock was declared operable and Action Statement 3.6.1.3a was terminated at 1255 hours, July 8, 1983. To improve operation of the air lock doors, existing air lock training of personnel will be reinforced. A review will be conducted to more clearly identify department responsibilities for operation and testing of the air locks, and appropriate changes will be made to administrative and procedural controls.

A review of the accepted practices involved revealed that more direct control of access is required. Procedures will be written or revised as necessary to require placing tags on an inoperable air lock door to prevent access through the door. Other potential improvements to administrative and procedural controls to insure better shift control of airlock access are being investigated.

FAILURE DATA:

Chicago Bridge and Iron Co.
Personnel Air Lock
Door Seal and Latch Roller

Prepared By R. Frahm



General Manager -
Salem Operations

SORC Meeting No. 83-097