



**PSEG**

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

Salem Generating Station

March 4, 1983

Mr. R. C. Haynes  
Regional Administrator  
USNRC  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Dear Mr. Haynes:

LICENSE NO. DPR-75  
DOCKET NO. 50-311  
REPORTABLE OCCURRENCE 83-010/03L

Pursuant to the requirements of Salem Generating Station  
Unit No. 2, Technical Specifications, Section 6.9.1.9.b,  
we are submitting Licensee Event Report for Reportable  
Occurrence 83-010/03L. This report is required within  
thirty (30) days of the occurrence.

Sincerely yours,

H. J. Midura  
General Manager -  
Salem Operations

RF:ks *7/97*

CC: Distribution

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PDR ADDCK 05000311  
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The Energy People

*IE22*

Report Number: 83-010/03L  
Report Date: 03-03-83  
Occurrence Date: 01-26-83  
Facility: Salem Generating Station Unit 2  
Public Service Electric & Gas Company  
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Reactor Coolant System - Pressurizer Overpressure Protection System - Inoperable.

This report was initiated by Incident Report 83-020.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 5 - RX Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

At 1325 hours, January 26, 1983, during routine shutdown operations, the No. 21 Control Air Header was isolated and tagged in order to perform leak rate testing on Containment Isolation Valve 21CA330. The Control Room Operator immediately noticed that Power Operated Relief Valve 2PR1 had closed, resulting in the loss of the Reactor Coolant System (RCS) vent path.

Both Pressurizer Overpressure Protection System (POPS) valves were inoperable at the time due to previous problems (See LER 83-005/03L) and planned maintenance. With the loss of the vent path, Technical Specification Action Statement 3.4.10.3b was entered. No RCS pressure transients were involved. Fuel cladding integrity was maintained throughout the occurrence, and the RCS vent path was restored within the interval specified.

APPARENT CAUSE OF OCCURRENCE:

In order to insure the RCS vent path was maintained during plant maintenance associated with the refueling, Block Valve 2PR6 had been opened with its power supply tagged out, and Valve 2PR1 had been blocked open with a clamp-type device. The redundant air supply to Valve 2PR1 was also available at the time of the tagout.

Investigation revealed that, when the No. 21 Control Air Header was tagged out, Excess Flow Check Valve 22CA418 went closed, isolating the redundant air supply to Containment Isolation Valve 22CA330. Since both containment isolation valves closed, all air was lost to Valve 2PR1.

The automatic check valves normally function to maintain containment air pressure in the event of leakage in the less vital areas; excess flow to those areas closes the valves. In this case, closing of the automatic check valve was probably related to the particular

APPARENT CAUSE OF OCCURRENCE: (cont'd)

configuration of the air system during outage maintenance activities; isolation of the No. 21 Header shifted all redundant loads to the No. 22 Header, apparently causing a sufficient surge to close the check valve.

The blocking device on Valve 2PR1 proved to be inadequate to hold the valve open, however. The device slipped on the stem, and the valve closed, isolating the ventpath. No procedures exist for the occasional provision of blocking or gagging devices related to various shutdown maintenance activities. The incident was assumed to involve the combination of several random, minor problems normally associated with the conduct of shutdown operations.

POPS Valves 2PR47 and 2PR48 had been reworked due to excessive leakage during initial fueling of the unit in 1980 (See LER 80-05/03L). Valve 2PR47 had exhibited similar problems during shutdown operation in 1981 (See LER 81-43/03L). Unit 2 was then operated at power until the current shutdown for refueling, when the problems with the POPS valves were re-encountered. Further investigation of the problems is pending disassembly of the valves, which is scheduled for the current refueling.

ANALYSIS OF OCCURRENCE:

The operability of two POPS valves or an RCS vent opening of greater than 3.14 square inches ensures that the RCS will be protected from pressure transients which could exceed the limits of 10 CFR 50 Appendix G when one or more RCS cold legs are less than or equal to 312°F. Either POPS has adequate relieving capability to protect the RCS from overpressurization resulting from events postulated to occur including starting an idle reactor coolant pump or a safety injection pump with a solid RCS.

Action Statement 3.4.10.3b requires:

With both POPs inoperable, depressurize and vent the RCS through a 3.14 square inch vent(s) within 8 hours.

The limitations protect the integrity of the RCS Pressure Boundary, one of the multiple fission product boundaries required by 10 CFR 50 (others include the containment and cladding). As noted, the integrity of the fuel cladding was maintained; containment integrity is not required in Mode 5.

Further, the required vent was re-established within the interval specified, and thus no risk to the health and safety of the public was involved. 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 control air lineup was returned to normal, and air was restored to Valve 2PR1. The valve opened, the required RCS vent was established,

CORRECTIVE ACTION: (cont'd)

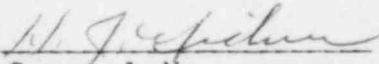
and at 1500 hours, January 26, 1983, Action Statement 3.4.10.3b was terminated. An improved blocking device was subsequently installed on the valve. Working in accordance with safe operating practice and approved procedures, operators clearly provided adequate control of the random problems involved. In view of the apparently isolated nature of the occurrence, no further action was deemed necessary.

Corrective action for the POPS valve problems is pending disassembly of the valves and determination of the failure mechanism. Further investigation of the problems by the Nuclear Engineering Department has been requested. A commitment to submit a Supplemental Report upon final resolution of the problems with POPS was made in LER 83-005/03L.

FAILURE DATA:

Marotta Scientific Controls  
Relief Valve  
Model MV-225C

Prepared By R. Frahm

  
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General Manager -  
Salem Operations

SORC Meeting No. 83-026