PSE&G

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

Salem Generating Station

February 28, 1986

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-75
DOCKET NO. 50-311
UNIT NO. 2
REPORT NO. 86-3
SPECIAL REPORT

This Special Report, required by Technical Specification 3.4.10.3 (Action Requirement c.), describes a Pressurizer Overpressure Protection System actuation during Reactor Coolant System fill and vent operations. This report, required within thirty (30) days of the event, is being submitted pursuant to the requirements of Technical Specification 6.9.2.

Sincerely yours,

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

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SPECIAL REPORT NUMBER 86-3

PLANT IDENTIFICATION:

Salem Generating Station - Unit 2
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Pressurizer Overpressure Protection System Channel II Actuation

Event Date: 01/30/86

Report Date: 02/28/86

This report was initiated by Incident Report No. 86-033

CONDITIONS PRIOR TO OCCURRENCE:

Mode 5 - Rx Power 0 % - Unit Load 0 MWe

This special report describes a Pressurizer Overpressure Protection System (POPS) actuation which occurred on January 30, 1986, during Reactor Coolant System (RCS) fill and vent operations. This report is submitted for informational purposes in accordance with the requirements of Technical Specification Action Statement 3.4.10.3.c. which states:

> In the event that either the POPS's or the RCS vents are used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within thirty (30) days. The report shall describe the circumstances initiating the transient, the effect of the POPS's or vents on the transient and any corrective action necessary to prevent recurrence.

DESCRIPTION OF OCCURRENCE:

On January 30, 1986, the Unit was in Mode 5 (Cold Shutdown) with RCS fill and vent operations in progress. RCS pressure was being raised to 325 psig (the minimum allowed pressure for starting reactor coolant pumps) utilizing No. 21 (centrifugal) Charging Pump. When RCS pressure reached approximately 300 psig, No. 23 (positive displacement) Charging Pump was started for better pressure control, and No. 21 Charging Pump was secured. However, at 1215 hours, following this evolution, POPS Channel II (2PR2) actuated on high RCS pressure. The relief valve actuation, which occurred at an indicated pressure of 355 psig, lasted for approximately three (3) seconds and lowered RCS pressure to approximately 325 psig.

APPARENT CAUSE OF OCCURRENCE:

This occurrence was attributed to operator error, in that there was a lack of adequate pressure control during the performance of this evolution.

APPARENT CAUSE OF OCCURRENCE: (cont'd)

This was caused by not securing No. 21 Charging Pump soon enough, resulting in the injection of too much mass into the Reactor Coolant System during solid plant operation.

ANALYSIS OF OCCURRENCE:

The Pressurizer Overpressure Protection System is designed to relieve the capacity of one (1) centrifugal charging pump or one (1) safety injection pump during low temperature operation. However, since No. 21 Centrifugal Charging Pump was stopped prior to the system actuation, the only relief required was for the excess mass which was injected during the filling operation. The result was a short duration (three second) actuation of one channel of the system. The Technical Specifications require the 2PR2 setpoint to be less than or equal to 375 psig, and the valve was observed to actuate at a minimum indicated pressure of 355 psig. Since 2PR2 is controlled by a 0-3000 psig transmitter, the apparent indicated error of twenty (20) psig is well within the plus or minus two percent (+-2%) channel accuracy for the transmitter and loop.

All systems and indications functioned as designed during this transient. In the event that the Channel II relief valve (2PR2) had failed to close, the operator would have responded by closing the blocking valve (2PR7). Therefore, this event resulted in no undue risk to the health or safety of the public. Because the POPS was used to mitigate an RCS pressure transient, this special report (required by Technical 3.4.10.3, Action Requirement c.) is being submitted pursuant to the requirements of Technical Specification 6.9.2.

CORRECTIVE ACTION:

This event was discussed with the operators involved, who acknowledged that the root cause was their lack of adequate attention during the pressure controlling evolution. Although they recognized the potential for a pressure transient prior to the event, slow response to the indicated pressure increase resulted in running the centrifugal charging pump for too long of a period. In accordance with PSE&G's existing policy concerning personnel error related events, this occurrence will be reviewed by the Nuclear Training Department to determine the need for additional training in the area of pressure control during solid plant operations.

General Manager-
Salem Operations

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SORC Mtg 86-011