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Public Service Electric and Gas Company 80 Park Place Newark, N.J. 07101 Phone 201/430-7000

October 28, 1980

Mr. Boyce H. Grier
Director of USNRC
Office of Inspection and Enforcement
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

LICENSE NO. DPR-70
DOCKET NO. 50-272
REPORTABLE OCCURRENCE 80-53/03L

Pursuant to the requirements of Salem Generating Station Unit No. 1 Technical Specifications, Section 6.9.1, we are submitting Licensee Event Report for Reportable Occurrence 80-53/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

F. P. Librizzi
General Manager -
Electric Production

CC: Director, Office of Inspection
and Enforcement (30 copies)
Director, Office of Management
Information and Program Control
(3 copies)

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Report Number: 80-53/03L
Report Date: October 28, 1980
Occurrence Date: 10/2/80
Facility: Salem Generating Station, Unit 1
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Inadvertent dilution of the Reactor Coolant System to less than 2000 ppm boron while in Mode 6.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 6 - RCS Drained to one-half Loop Level
Reactor Vessel Head Studs Detensioned

DESCRIPTION OF OCCURRENCE:

At 0837 hours, a routine Reactor Coolant Boron Sample indicated a concentration of 1898 ppm which is less than the 2000 ppm minimum required by Technical Specification 3.9.1. Boration was commenced in accordance with the Action Statement and the RCS boron concentration was returned to 2132 ppm by 1050 hours.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

Personnel error - poor planning. Failure to anticipate the effects of water entering the Reactor Coolant System.

ANALYSIS OF OCCURRENCE:

While the Reactor Coolant System was drained to approximately one-half loop level, a hydrolazer was being used to decontaminate the steam generator channel heads.

Due to a malfunction of a suction connection to remove the spent water, the water was entering the Primary Coolant System causing the dilution.

The boron concentration was 2061 ppm at 0120 hours. By 0837 hours, the concentration had been reduced by 163 ppm to 1898. At that time, rapid boration was initiated and 450 gallons of 12% weight boric acid was added to restore the RCS to 2132 ppm.

Technical Specification 3.9.1 requires that the more restrictive of the two reactivity conditions of boron concentration ≥ 2000 ppm or $K_{\text{effective}} \leq 0.95$ to be met. At the time of the dilution, the $K_{\text{effective}}$ was determined to be 0.889; however, this is the less restrictive condition.

CORRECTIVE ACTION:

The Reactor Coolant System was borated and returned to within specifications by 1050 hours.

The decontamination job in the steam generator was essentially complete and was terminated.

A procedure for hydrolazing the primary system will be developed in order to preclude the introduction of water.

FAILURE DATA:

Not Applicable

Prepared By J. M. Randolph

SORC Meeting No. 87-80

J. M. Randolph
Manager - Salem Generating Station