



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

Salem Generating Station

April 28, 1982

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

Dear Mr. Haynes:

LICENSE NO. DPR-70
DOCKET NO. 50-272
REPORTABLE OCCURRENCE 82-026/03L

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 82-026/03L. This report is required within
thirty (30) days of the occurrence.

Sincerely yours,

H. J. Midura
General Manager -
Salem Operations

RF:ks

CC: Distribution

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Report Number: 82-026/03L
Report Date: 04-28-82
Occurrence Date: 04-09-82
Facility: Salem Generating Station, Unit 1
Public Service Electric & Gas Company
Hancocks Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Boric Acid Storage Tanks and Boron Injection Tank -
Concentration Out of Specification.

This report was initiated by Incident Reports 82-077,
82-082, 82-083 and 82-084.

CONDITIONS PRIOR TO OCCURRENCE:

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

DESCRIPTION OF OCCURRENCE:

On three different occasions, Nos. 11 and 12 Boric Acid Storage Tanks (BAST's) and Boron Injection Tank (BIT) boron concentrations decreased below the Technical Specification limit of 20,100 ppm boron.

On April 9, 1982, sample results from the BAST's and BIT were 19,580 ppm, 19,597 ppm and 19,272 ppm respectively. Nos. 11 and 12 BAST's and the BIT were declared inoperable, and at 1230 hours, Action Statements 3.1.2.8.a and 3.5.4.1 were entered.

The BAST's and BIT were restored to an operable status, and on April 13th, the boron concentrations again decreased below the specification limits. Nos. 11 and 12 BAST's and the BIT were declared inoperable at 1300 hours, and Action Statements 3.1.2.8.a and 3.5.4.1 were entered for a second time.

Later that day, after batching had increased tank boron concentrations, sample results showed the BIT was below specification for a third time. The BAST's and BIT were declared inoperable, and at 2020 hours, Action Statements 3.1.2.8.a and 3.5.4.1 were entered.

These occurrences constituted operation in a degraded mode in accordance with Technical Specification 6.9.1.9.b.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The decreases in the BAST and BIT boron concentration resulted from the leakage of charging water past a damaged seat on Valve 1SJ4.

ANALYSIS OF OCCURRENCE:

Technical Specification 3.1.2.8.a requires:

With the boric acid storage system inoperable and being used as one of the required borated water sources, restore the storage system to operable status within 72 hours, or be in at least hot standby within the next 6 hours and borated to a shutdown margin equivalent to at least 1% delta k/k at 200°F; restore the boric acid storage system to operable status within the next 7 days or be in cold shutdown within the next 30 hours.

Technical Specification 3.5.4.1 requires:

With the BIT inoperable, restore the tank to operable status within 1 hour, or be in hot standby and borated to a shutdown margin equivalent to 1% delta k/k at 200°F within the next 6 hours; restore the tank to operable status within the next 7 days or be in hot shutdown within the next 12 hours.

CORRECTIVE ACTION:

On April 9, 1982, the Reactor Coolant System was already borated to a shutdown margin equivalent to 5% delta k/k at 200°F, in compliance with Action Statement 3.5.4.1. At 2340 hours, sample results showed No. 11 BAST boron concentration was 20,610 ppm. The tank was declared operable, and Action Statement 3.1.2.8.a was terminated. At 0215 hours, April 10, 1982, results of the BIT boron analysis indicated 20,665 ppm. The BIT was declared operable, and Action Statement 3.5.4.1 was terminated.

On April 13, 1982, boric acid addition to the BAST's and BIT was commenced. The shutdown margin was increased by control rod insertion, and Mode 3 was entered in preparation for compliance with Action Statement 3.5.4.1. At 1921 hours, sample results showed No. 11 BAST was within specification. The tank was declared operable, and Action Statement 3.1.2.8.a was terminated. At 1956 hours, sampling indicated BIT boron to be within limits. The BIT was declared operable, and Action Statement 3.5.4.1 was terminated. An investigation was initiated to determine the source of the BAST and BIT dilution.

When, at 2020 hours, sample results showed the BIT boron concentration had decreased for a third time, the Reactor Coolant System was immediately borated to a shutdown margin equivalent to 1% delta k/k at 200°F. It was determined that the dilution flow path was through Valves 1SJ4 and/or 1SJ5, and a plant cooldown was commenced to repair the valve(s). Mode 4 was entered at 0840 hours, April 14, 1982, and Action Statement 3.5.4.1 was terminated. At 1350 hours, Mode 5 was entered, and Action Statement 3.1.2.8.a was terminated. Valve 1SJ4 was found to have a damaged seat, and was properly repaired.

FAILURE DATA:

Darling Valve and Mfg. Co.
4 inch Motor Operated Gate Valve
Type S350WDD

Prepared By R. Frahm

H. J. Michener
General Manager -
Salem Operations

SORC Meeting No. 82-45