



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

Salem Generating Station

July 14, 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 81-110/03X-2
SUPPLEMENTAL REPORT

Pursuant to the requirements of Salem Generating Station
Unit No. 1 Technical Specifications, Section 6.9.2, we are
submitting supplemental Licensee Event Report for Reportable
Occurrence 81-110/03X-2.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "H. J. Midura", with a stylized flourish at the end.

H. J. Midura
General Manager -
Salem Operations

RH:ks *752*

CC: Distribution

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PDR ADOCK 05000272
S PDR

The Energy People

IE22

95-2189 (20M) 11-81

Report Number: 81-110/03X-2
Report Date: 07-14-82
Occurrence Date: 11-06-81
Facility: Salem Generating Station, Unit 1
Public Service Electric & Gas Company
Hancocks Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Inadvertent Safety Injection.

This report was initiated by Incident Reports 81-445, 81-446, 81-447 and 81-449.

CONDITIONS PRIOR TO OCCURRENCE:

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

DESCRIPTION OF OCCURRENCE:

On November 6, 1981, while in hot standby following a reactor trip, an Inadvertent Safety Injection occurred due to loss of the 1A vital instrument bus inverter. The 1A inverter was declared inoperable and Action Statement 3.8.2.1 was entered at 1411 hours. During verification of the Safety Injection, it was discovered that the No. 11 Containment Fan Coil Unit did not start in low speed mode in response to the Safety Injection signal and that the Boron Injection Tank (BIT) inlet valves 1SJ4 and 1SJ5 failed to open fully. Subsequently, while stroking the 1SJ4 and 1SJ5 valves to verify proper operation, water was injected into the BIT, diluting it to below Technical Specification limits. The BIT was declared inoperable and Action Statement 3.5.4.1 was entered at 2035 hours.

This occurrence constituted operation in a degraded mode in accordance with Technical Specification 6.9.2.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The Safety Injection was caused by high steam flow indications due to the loss of vital bus 1A and low-low Tavg on two loops. The loss of the 1A inverter was associated with replacing the cabinet fan unit fuses. A voltage transient was induced into the control wiring causing the inverter to trip off line.

The failure of the BIT inlet valves was previously addressed by LER 81-97/01T and the failure of No. 11 CFCU to start was addressed in LER 81-111.

ANALYSIS OF OCCURRENCE:

The unit was designed for 50 safety injection transients. This safety injection transient was No. 15. It was of less severity than the design basis transient, and, therefore, had no detrimental effect on the unit, so operation may safely continue.

Technical Specification 3.8.2.1 requires:

With vital bus 1A inoperable, restore the bus to operable status within 8 hours or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

Technical Specification 3.5.4.1 requires:

With the Boron Injection Tank 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 degrees Fahrenheit 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:

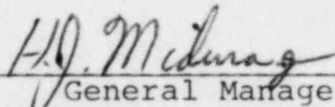
The 1A vital bus was removed from the inverter and connected to the alternate Sclatron power source. The BIT was placed on recirculation with the boric acid storage tanks and a subsequent sample of the BIT was within specifications. At 1807 hours the inverter was restored by replacing the fuses, and Action Statement 3.8.2.1 was terminated. The BIT was declared operable and Action Statement 3.5.4.1 was terminated at 2330 hours.

The inverter cabinet fan power cable was re-routed within the cabinet to preclude any interaction with the inverter control wiring. Design Change Request (DCR) 1ET-1352, installed electromagnetic filters, circuit breakers, and improved wiring. Testing has shown that the electromagnetic noise produced by energizing the fan, has been effectively reduced.

FAILURE DATA:

Garret Corporation
Inverter
Model 524038-1

Prepared By R. Heller


General Manager -
Salem Operations

SORC Meeting No. 82-68