PSEG

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

Salem Generating Station

April 10, 1989

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
SPECIAL REPORT 89-2

This Special Report addresses the inoperability of the medium and high range Plant Vent Radiation Monitors (2R45B & 2R45C) which were not restored to operable status within seven (7) days. This report satisfies the reporting requirements of Technical Specification 3.3.3.1.b Table 3.3-6 Action 26 pursuant to Technical Specification 6.9.2. It is being submitted within 14 days of the event as per the Action Statement.

Sincerely yours,

L. K. Miller
General Manager -
Salem Operations

MJP:pc

Distribution

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SPECIAL REPORT NUMBER [redacted]-2

PLANT IDENTIFICATION:

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

IDENTIFICATION OF OCCURRENCE:

Radiation Monitoring Channels 2R45B and 2R45C inoperable for greater than seven days due to equipment concern

Event Date(s): 4/03/89

Report Date: 4/10/89

This report was initiated by Incident Report No. 89-173.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Reactor Power 100% Unit Load 1140 MWt

DESCRIPTION OF OCCURRENCE:

On March 27, 1989 at 0420 hours, Radiation Monitoring System (RMS) channels 2R45B and 2R45C were declared inoperable and were blocked. Since they were not returned to service until April 3, 1989 at 2345 hours (greater than seven days), this Special Report is required in accordance with Technical Specification 3.3.3.1.b Table 3.3-6 Action 26.

The 2R45 RMS channels were declared inoperable due to intermittent spiking.

Technical Specification 3.3.3.1.b Table 3.3-6 Action 26 states:

> "With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:
>
> 1. either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
>
> 2. prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

APPARENT CAUSE OF OCCURRENCE:

The root cause of this event has been attributed to an equipment failure of the associated RMS channels.

ANALYSIS OF OCCURRENCE:

The 2R45B and 2R45C channels monitor the Plant Vent radioactive noble gas releases via representative sampling. The 2R45B monitor is a

ANALYSIS OF OCCURRENCE: (cont'd)

medium range monitor and the 2R45C channel is a high range monitor. They are both required in operating modes 1 - 4 (power operation to Hot Shutdown). Their purpose is to monitor significant releases of radioactive materials in compliance with the Updated Final Safety Analysis Report (UFSAR) and federal regulation.

The monitors are manufactured by Eberline Instrument Co. They are energy compensated GM tubes model types Eberline SA14 and SA15, respectively.

The intermittent spiking of the 2R45B monitor had resulted in deenergizing the 2R41 (Low Range Plant Vent Monitors) sample pump. The channel is interlocked with the pump to cause this to occur. When the 2R41 pump low flow alarm was received, the pump was re-started.

CORRECTIVE ACTION:

The 2R45 channels were calibrated and functionally tested successfully.

A design modification to supply regulated voltage to the RMS channels is being developed. This design will incorporate the use of either an uninterruptable power supply (UPS) or a regulated transformer.

J. K. Miller

General Manager -
Salem Operations

MJP:pc

SORC Mtg. 89-029