PSE&G

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038

Salem Generating Station

November 23, 1992

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 92-8

This Special Report addresses the circumstances surrounding the inoperability of the 2R45 Radiation Monitoring System (RMS) channels for greater than seven (7) days. This report is submitted in accordance with the requirements of Technical Specification 3.3.3.1 Table 3.3-6 Action 26 pursuant to Technical Specification 6.9.2. It is required within fourteen (14) days from when the RMS channels had failed.

Sincerely yours,

C. A. Vondra
General Manager -
Salem Operations

MJP:pc

Distribution

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SPECIAL REPORT NUMBER 92-8

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 failure

Event Date(s): 11/16/92

Report Date: 11/23/92

This report was initiated by Incident Report No. 92-739 which identifies the November 9, 1992 failure of the 2R45 Radiation Monitoring System (RMS) channels. The 2R45 RMS channels have not been returned to service within seven days; therefore, this Special Report is required in accordance with Technical Specification 3.3.3.1.b Table 3.3-6 Action 26 which 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.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Rx Power 100%

DESCRIPTION OF OCCURRENCE:

On November 9, 1992 at 1300 hours, the 2R45 RMS channels were declared inoperable and were removed from service. Technical Specification 3.3.3.1.b Table 3.3-6 Action 26 was entered at this time.

Operations personnel had begun to open the channel drawer (to obtain required log readings) when spiking occurred. The drawer is opened to gain access to the channel keyboard.

APPARENT CAUSE OF OCCURRENCE:

The cause of this event is equipment failure. A bad ground connection was discovered on the three wire power cable, which comes into the rack. The green ground wire is lugged and bolted to a

APPARENT CAUSE OF OCCURRENCE: (cont'd)

circuit board. Bench testing revealed a 1/2 ohm resistance across the connection. The connection was subsequently cleaned and refastened. The observed resistance reduced to 0 ohms and the observed spiking has not recurred. During investigation of this event, several other minor 2R45 channel equipment problems were identified and corrected.

ANALYSIS OF OCCURRENCE:

The 2R45 channels monitor the Plant Vent radioactive noble gas releases via representative sampling. The 2R45B monitor is a 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. They have an alarm function (via a common annunciator circuit) which causes deenergization of the 2R41 channels.

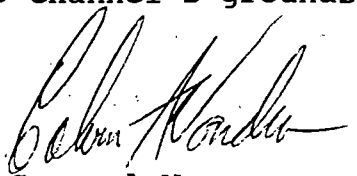
CORRECTIVE ACTION:

Repair of the bad ground wire connector has been completed. Also, the other minor equipment concerns were corrected.

The other grounds in the 2R45 channel drawer were tested and were found to register 0 ohms.

Channel post maintenance functional retesting was successfully completed. Prior to returning the 2R45 RMS channels to service it was decided to complete the required channel calibration surveillance (done every 18 months). The channel calibration surveillance revealed that the 12V battery (Eberline number 12400-BTGC7) would not maintain its charge. This battery is used to maintain 2R45 RMS channel operation for up to 8 hours upon loss of power. The battery has been replaced. Upon successful completion of the channel calibration surveillance, the 2R45 RMS channels will be returned to service.

Salem Unit 1 uses the same model R45 RMS channel equipment. A work order has been initiated to test its R45 channel's grounds.



General Manager -
Salem Operations

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