



LR-N14-0036

TS 6.9.2

**JAN 29 2014**

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Salem Generating Station, Unit 2  
Renewed Facility Operating License No. DPR-75  
NRC Docket No. 50-311

Subject: **Special Report 311/14-01-00, pursuant to the Requirements of Salem Unit 2 Technical Specification (TS) 3.3.3.1, Action 26, for the Unit 2 Plant Vent Radiation Monitor (2R41) inoperable for >7 days**

This Special Report is being submitted pursuant to the requirements of Salem Unit 2 Technical Specification (TS) 3.3.3.1, Action 26. TS 3.3.3.1 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 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 actions taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status."

#### **DESCRIPTION OF OCCURRENCE**

On January 15, 2014 at 0905, due to elevated erratic readings on the 2R41B, Intermediate Range Noble Gas Monitor, TS 3.3.3.1 action b was entered and the 2R41B and 2R41D channels of the Plant Vent Radiation Monitor were declared inoperable. In accordance with the TS, the operating crew notified Chemistry Personnel to establish the pre-planned alternate method of monitoring the appropriate parameters.

The monitor had previously exhibited erratic behavior on four occasions. On each of the occasions trouble shooting was performed in accordance with station procedures.

On November 11, 2013, the monitor exhibited erratic behavior. Trouble shooting was performed. The monitor power supplies and coaxial cable connectors to the input circuit board (PDA board) were checked. During the checks on the power supply the monitor readings returned to normal. The detector performance was monitored over a period of time during which time the condition did not repeat. The radiation monitor was restored to service.

On November 24, 2013, the detector again exhibited the same erratic behavior. Trouble shooting identified a loose ground connection between the radiation monitor door and chassis which was repaired. The radiation monitor was restored to service after monitoring performance. No repetition of the erratic behavior was exhibited.

On December 8, 2013, the Overhead Alarm (OHA) was received in the control room for a failure of the monitor. The detector exhibited similar erratic behavior. Trouble shooting identified soldering flux residue on a pre-amp extension cable pin. The pin connector was examined and cleaned. The radiation monitor was restored to service after monitoring performance. No repetition of the erratic behavior was exhibited.


On January 2, 2014, the detector again exhibited the same erratic behavior. Trouble shooting was performed and the input output (IOP) board was replaced. The radiation monitor was restored to service after monitoring performance. No repetition of the erratic behavior was exhibited.

On January 15, 2014, the detector again exhibited the same erratic behavior. Trouble shooting was performed and identified a crack in the outer jacket insulation of the preamp cable and some irregularities in the insulation on the detector face. The detector and preamp (as a single unit) were replaced. The detector remains out of service pending additional trouble shooting.

The Failure Modes and Casual Table (FMCT process) has been implemented in accordance with station procedures. The FMCT has eliminated the previous issues as causes of the erratic behavior. The vendor has been requested to come to the site to assist in additional trouble shooting efforts. The vendor is anticipated to be on site the first week in February. The estimated return to service for the 2R41 Plant Vent Monitor is in early February after the vendor site visit.

There are no new commitments in this letter. If there are any questions, please contact Thomas Cachaza at 856-339-5038.

Sincerely,



John F. Perry  
Salem Site Vice President

- C     W. Dean, Administrator – Region 1
- J. Hughey, Licensing Project Manager – Salem
- P. Finney, USNRC Senior Resident Inspector – Salem
- P. Mulligan, Manager, IV, Bureau of Nuclear Engineering
- T. Cachaza, Salem Commitment Coordinator
- L. Marabella, Corporate Commitment Coordinator