



SVP-22-036

June 10, 2022

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

Quad Cities Nuclear Power Station, Unit 1 and 2
Renewed Facility Operating License No. DPR-29 and 30
NRC Docket No. 50-254 and 265

Subject: Offsite Dose Calculation Manual (ODCM) Section 12.2.2
Radioactive Gaseous Effluent Monitoring Instrumentation Report
Main Chimney High Range Noble Gas Monitor

This letter submits the Radioactive Gaseous Effluent Monitoring Instrumentation Special Report required by Quad Cities Nuclear Power Station (QCNPS) Offsite Dose Calculation Manual (ODCM) Section 12.2.2, "Radioactive Gaseous Effluent Monitoring Instrumentation Report," Action O.1."

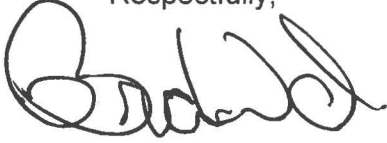
On May 11, 2022, at 0555 CST, the Main Chimney High Range Noble Gas Monitor was giving a LO FAIL indication in the control room and was declared inoperable.

The inoperability of the Main Chimney High Range Noble Gas Monitor required entry into ODCM Section 12.2.2, "Radioactive Gaseous Effluent Monitoring Instrumentation Report," Condition F, due to less than the minimum number of OPERABLE channels of the Main Chimney High Range Noble Gas Monitor. Action F.1 requires establishment of the preplanned alternate method of monitoring within 72 hours. This action was completed on May 11, 2022, at 0555 via the Main Chimney GE monitors. Action F.2 requires the instrument channel to be restored to OPERABLE status within 7 days. The 7-day time requirement was reached on May 18, 2022, at 0555 CST without the monitor being restored to operable. Hence the need to submit this Special Report.

Resolution of this issue within the 7-day requirement was not feasible due to multiple failures associated with the high range detector and electronics. However, on May 31, 2022, the Main Chimney High Range Noble Gas Monitor was declared operable following repairs and testing.

Should you have any questions concerning this letter, please contact Anna Wilson,
Chemistry Manager, at (309) 227-3200.

Respectfully,

A handwritten signature in black ink, appearing to read "Brian Wake". The signature is stylized with large, sweeping loops and a prominent initial "B".

Brian Wake
Site Vice President
Quad Cities Nuclear Power Station

Attachment: Main Chimney High Range Noble Gas Monitor Position Paper

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

ATTACHMENT

Main Chimney High Range Noble Gas Monitor Inoperability

Preplanned Alternate Method of Monitoring

An alternate method of monitoring the main chimney effluent for noble gases was implemented while the Main Chimney High Range Noble Gas Monitor was inoperable. The alternate method required the Main Chimney GE Monitors to be operable. The Emergency Response Organization Field Monitoring Teams are the secondary method of monitoring.

This guidance was communicated by Chemistry to the site senior leadership team, Regulatory Assurance, Emergency Preparedness, and Operations personnel. This alternate method provides an acceptable means of indication to ensure the Main Chimney High Range Noble Gas Monitor function has been accomplished. Further, the loss of the Main Chimney High Range Noble Gas Monitor is tracked in the Corrective Action Program via Issue Reports 4499133 and 4500461.

Apparent Cause of the Inoperability

The actions taken to return the Main Chimney High Range Noble Gas Monitor to service included replacing the High Range Channel 9 detector, the interface box electronics (IB-4), and a new check source mechanism rotary solenoid. The cause of the monitor failure was determined to be the failed interface box (IB-4) board.

Plans and Schedule for Returning Function to Operable Status

Once the various parts on the monitor were replaced, the calibration and functional test of the detector were successfully completed on May 31, 2022 and the Main Chimney High Range Noble Gas Monitor was declared OPERABLE on May 31, 2022 at 1444 CST. All alternate methods of monitoring have been discontinued. No abnormal indications were received during the period of time the alternative detection method was in use.