
Air Quality Monitoring Audit

How We Audit Air Quality Monitoring

Twice a year, the Ministry of Environment's air audit team audits every air quality monitoring station in British Columbia that falls under provincial jurisdiction. This includes both ministry-operated sites and monitoring stations that are regulated under industry permits, such as continuous emissions monitors for industrial stacks and ambient air monitors.

The purpose of the audit is to ensure the continuing quality of the data collected from the air monitoring stations. The audit provides a standardized reference for all data collected from an instrument after the completion of the audit and acts as a reference for all data collected from the point of the previous instrument audit.

Auditing Procedures

Audits are performed on the air monitoring instruments as well as on the monitoring system as a whole. As part of the audit, the audit team will review the internal operational parameters of the instruments and the documentation that is at the station.

The audit team gives regional staff and individual permit holders seven to fourteen days notice of an impending audit. However, the team can perform unannounced audits as well. After notice of an impending audit has been given, an air monitor cannot be calibrated, and no adjustments should be made to the instruments or support equipment in the station.

If a monitoring station fails an audit, the audit team will perform quarterly audits until the station passes. The results of the audits are fed into the Ministry of Environment's data quality assurance program for the validation of air

quality data in British Columbia. This is also in conjunction with the quarterly calibrations that the air technician responsible for each station is required to perform.

Audit Standards

The Ministry of Environment follows procedures set out by the National Air Pollution Surveillance Network and the United States Environmental Protection Agency, as appropriate for station operation.

In auditing operational monitors, the audit team uses certified gases and instruments that have been calibrated to a primary standard. Monitors that fail an audit also fail Ministry quality assurance requirements, and therefore, the data from failed monitors is unacceptable for use by the Ministry.

Effective January 1, 2009, the standard audit criteria for continuous emission monitors and ambient air monitoring instruments have been harmonized with the standards set by the United States Environmental Protection Agency.

The new criteria are detailed in the Ministry of Environment's [Standard Audit Procedure for Continuous Emission Monitors and Ambient Air Monitoring Instruments Procedure \(PDF\)](#).