

# Fenceline Ambient Air Monitoring for Construction, Demolition and Remediation



## Areas of Expertise

- Monitoring plan development and network design.
- United States Environmental Protection Agency (USEPA) guided risk assessment
- State Remediation Programs
- Engineering design, system fabrication, and installation
- Site-specific air monitoring for constituents of interest
- Collection of accurate air quality data
- Instrumentation sales, lease and services
- Data collection, processing, validation, reporting, and quality assurance
- Field training
- Laboratory data management

## Overview

Fenceline ambient air quality and meteorological monitoring refers to air monitoring along a property's perimeter. Fenceline monitoring is critical to evaluating a site's air quality management program, and many state and federal regulations require it during site remediation to demonstrate compliance. A well-designed monitoring program eases agency and public health concerns and helps reduce potential liabilities associated with remedial activities.

AECOM has been designing and providing cost-effective fenceline ambient air monitoring solutions for over 40 years. We have developed programs to monitor for criteria pollutants, air toxics, site-specific compounds/pollutants, and meteorological parameters. With worldwide offices, our air quality specialists are close to project sites and maintain strong credibility with agency personnel. Regardless of size, purpose, or duration of a monitoring and sampling program, AECOM can assist or completely manage air monitoring operations.

## Our Approach

Whether conducted for permitting, compliance, or public information and education, AECOM's fenceline ambient air quality and meteorological monitoring programs ensure that data is collected using recognized standards, represents actual conditions, is obtained from certified instrumentation, and is thoroughly documented through our vigorous QA/QC procedures. Prior to designing a program, we focus on defining both the internally and externally imposed monitoring program objectives.

Our programs address the following goals, which may be tailored to fit a project's needs and data quality objectives:

- Protect human health and the environment
- Monitor and document fenceline air quality during remediation to protect nearby sensitive receptors
- Establish background levels of target compounds prior to remediation
- Evaluate the need and effectiveness of vapor and/or dust controls
- Develop remedial action levels and compliance criteria that are protective of public health.
- Meet environmental justice requirements by providing risk management and public confidence
- Reduce potential liabilities due to remedial activities

AECOM's well-designed monitoring programs help our clients to ease agency and public health concerns. This service often functions as the key activity to convert liabilities into assets for our clients.

Moreover, our programs enable our clients to meet environmental justice goals and stay in compliance with state and federal ambient air quality regulations so they can stay focused on their core business functions.



## Fenceline Ambient Air Monitoring for Construction, Demolition and Remediation *(continued)*

### Key AECOM Attributes

**EXTENSIVE EQUIPMENT INVENTORY.** We have developed an extensive inventory of state-of-the-art equipment and instrumentation to fit the needs of almost any remediation program. Coupled with our highly experienced staff, we quickly mobilize and initiate fenceline air monitoring programs.

**TACKLING TECHNICAL CHALLENGES.** AECOM's air quality engineers and technicians have designed systems for fenceline air monitoring projects in a number of challenging locations. Our custom designs include technical advances such as portable solar powered monitoring stations, remote data transmission, unique equipment integration, and special security measures.

**SITE-SPECIFIC APPROACH.** AECOM carefully reviews the project's remediation plan and project objectives to develop an integrated air monitoring approach. Our approach and real-time data collection are used to make informed decisions facilitating dust, vapor and odor controls.

**QUALITY PROGRAMS, START TO FINISH.** Quality assurance begins before we mobilize to the project site. Our professionals design a complete QA/QC program tailored to the data quality objectives and project requirements. The QA/QC component in conjunction with our operating procedures ensure consistency from field collection through data processing and analysis. Our field technicians and data processing staff are trained in QA/QC procedures to ensure data are accurate and will meet data quality objectives.

**MEETING DATA NEEDS.** AECOM provides data analysis in formats to meet individual reporting needs. We have designed and operated data acquisition systems which automatically transmit the data collected in the field to our central computer system to be processed, stored, and delivered in easy-to-use formats. Our technical staff also routinely design semi-automated reporting programs that can provide preliminary data summaries in the event data needs to be summarized quickly.

### Areas of Expertise

**MONITORING PLAN DEVELOPMENT AND NETWORK DESIGN.** AECOM has developed and implemented air monitoring plans for a wide array of remediation projects and can tailor to a project's specific needs. Our process begins with client and agency consultation, which is critical to accomplish internal and external program objectives.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) GUIDED RISK ASSESSMENT.** Risk assessment in accordance with the USEPA Regional Screening Levels Users Guide and the development of site-specific compliance criteria ensures agency compliance and the protection of public health near remedial activities.

**STATE REMEDIATION PROGRAMS.** We deliver a best-in-class approach to meet compliance with the following programs:

- New York State Department of Health (NYSDOH) in the New York State Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10)
- New Jersey Administrative Code (N.J.A.C.) 7:26E-5.1(b)1
- Indiana Department of Environmental Management (IDEM) Voluntary Remediation Program (VRP)
- Title 35 Illinois Administrative Code (35 IAC) Section 740.445
- Ohio Voluntary Action Program (VAP), specifically Ohio Administrative Code (OAC) 3745-300-11

**ENGINEERING DESIGN, SYSTEM FABRICATION, AND INSTALLATION.** The proper design and installation of fenceline monitoring equipment ensures accurate, defensible data and facilitates more informed management decisions onsite.

**SITE-SPECIFIC AIR MONITORING FOR CONSTITUENTS OF INTEREST.** Our experience includes real-time monitoring for particulates (PM10), volatile organic compounds, and hydrogen sulfide. We also conduct integrated sampling for individual VOCs, polycyclic aromatic compounds, metals, polychlorinated biphenyls and pesticides to evaluate compliance with health-based acceptable air concentrations.

**COLLECTION OF ACCURATE AIR QUALITY DATA.** Accurate data coupled with proper quality assurance/quality control (QA/QC) procedures provides the most reliable and cost-effective route to compliance. AECOM's expertise with advanced air monitoring equipment minimizes inaccurate readings, system downtime and reduces our clients' costs of owning or leasing equipment.

**INSTRUMENTATION SALES, LEASE AND SERVICES.** Our large inventory of capital equipment allows us to offer lower lease rates for air quality and meteorological systems. You may purchase or lease an entire station, or individual components depending on a project's individual needs and objectives. Our services include operation, maintenance and calibrations.

**DATA COLLECTION, PROCESSING,** validation, reporting, and quality assurance. Our dedication to quickly providing accurate data allows our clients to respond to air quality challenges confidently and without hesitation.

**FIELD TRAINING.** Effective training for the use of different measurement systems and sampling procedures gives our clients the necessary knowledge and skills to execute successful air monitoring programs.

**LABORATORY DATA MANAGEMENT.** Laboratory data review and validation by our trained chemists ensures accurate data that meets project data quality objectives and supports important management decisions.

