

CEMS Design, Installation and Testing



Areas of Expertise

- CEMS Design and Installation
- Evaluation and Testing
- Data Collection and Software Customization
- Training and Audit Support
- Control Device Testing

Key AECOM Attributes

- Independent CEMS designer with 40 years of experience and expertise
- Qualified total system provider of CEMS services from system design to installation to startup testing to on-going operational maintenance
- Proven ability to design a technically defensible yet cost effective CEMS system
- Broad expertise in customizing monitoring system design and/ or fabrication services to meet specific client needs

Overview

Many state and federal regulations, driven by the Clean Air Act and subsequent Amendments, require facilities to install and operate Continuous Emissions Monitoring Systems (CEMS). These regulations mandate gathering and reporting accurate data, strict quality assurance programs, and regular CEMS maintenance to demonstrate that a facility maintains compliance. Penalties for noncompliance or poor data can be financially punishing for a facility — resulting in fines or major operational modifications to a facility, perhaps even plant shutdowns.

Following issuance of several rules over the past decades — including US EPA's New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAPs), and the Acid Rain Program (ARP) as well as Canada's Standards for Mercury Emissions, and rulings from individual states — the need for CEMS design specification, selection, and installation has increased greatly with the progression of time.

Often, the best way for commercial and industrial emissions sources to ensure they are purchasing, installing, and operating a cost-effective monitoring system that suits their needs and maintains compliance is to use an experienced, independent CEMS consultant. AECOM has 40 years of experience assisting clients with their emissions monitoring needs.

Our Approach

AECOM has the experience and skills to handle CEMS from evaluation and testing to design, installation, and operation. Our CEMS service is among the best in the industry because we offer the full range of services designed to produce cost-effective compliance throughout the life of the system. AECOM serves as your CEMS solutions partner, rather than acting as a vendor for a single phase of the process, which often leads to incomplete, or suboptimal results.

By choosing an experienced, independent CEMS consultant, companies subject to CEMS regulations know they will receive the holistic guidance necessary to achieve compliance, maintain their equipment, and produce accurate, scientifically defensible data. This approach maximizes the likelihood of cost-effective compliance, including:

- Minimizing the costly replacement of system components
- Decreasing the chances of regulatory fines and /or plant shutdowns
- Avoiding over-design or inadequate systems
- Upgrading outdated data collection and management systems
- Coordinating with regulatory authorities and contractors
- Integrating plant and CEMS operations
- Preparing proper protocols and test plans for source characterization tests and compliance certifications
- Installing and certifying CEMS systems
- Satisfying various federal and state air quality requirements while eliminating unnecessary expenditures



CEMS Design, Installation and Testing *(continued)*



Areas of Expertise

Assisting clients with air quality monitoring for 40 years, AECOM is a leader in providing cost-effective CEMS consulting assistance to help companies maintain compliance and avoid the fines, major operational modifications, or plant shutdowns associated with noncompliance. Our multiple areas of CEMS expertise include:

CEMS DESIGN AND INSTALLATION. Our CEMS design experts are familiar with many source types and measurement equipment that will be used to assess your emissions, and our experienced engineering staff can help design your CEMS. During monitoring system design, AECOM works closely with you to produce a bid specification for vendors or arrange for complete system design and equipment purchase. We can also assemble a custom CEMS system in our fully supported instrumentation/fabrication lab.

EVALUATION AND TESTING. For facilities with monitoring program needs, we can perform CEMS-related compliance services such as relative accuracy testing, quarterly audits, protocol preparation, monitoring, and quality assurance plans. We can investigate, update, or resolve existing systems problems. Our source testing teams are familiar with all EPA testing methods used to characterize your emissions.

DATA COLLECTION AND SOFTWARE CUSTOMIZATION. We design user-friendly data collection and reporting packages using commercially available software so our clients can produce the permit required reports. AECOM will use available software packages to enable data collection and reporting without being tied to a specific vendor.

TRAINING AND AUDIT SUPPORT. AECOM will provide continued support after your system is installed and certified. Our experienced field service organization will ensure high quality CEMS data, and our test crews can support all your audit requirements, including full Relative Accuracy Test Audit services.

CONTROL DEVICE TESTING. We guarantee certification of our clients' CEMS. Our test crews will travel to our clients' facilities with a fully instrumented, state-of-the-art CEMS trailer to perform all necessary testing to certify their CEMS. Once testing is complete, we provide a fully documented report for agency submittal. Along with our CEMS Certifications, AECOM conducts control device efficiency and emission testing utilizing our dual monitoring trailers — providing our clients with peace of mind concerning the performance of their pollution control systems.

