

Source Emissions Testing



O'Brien & Gere is among the fastest growing source emission testing firms in the Northeast. It is also the largest source emission testing firm offering a total air quality solution, including dispersion modeling and risk assessments, permitting and air pollution control design, fabrication, and construction services. To ensure accurate and timely results, O'Brien & Gere employs its time-proven Emission Test Plan (ETP) Process. An ETP is developed for each of our full range of routine and complex multi-point test programs.

The 1990 Clean Air Act amendments placed responsibility on numerous industrial facilities to control both new and existing sources of air pollution. Since its inception, a number of state and federal regulations have been promulgated which placed additional regulatory compliance burdens on source owners. These requirements include air emissions compliance demonstrations, emission monitoring and reporting, and pollution control. To help meet these compliance obligations, facilities may opt to conduct source testing, also known as stack testing.

Stack testing involves the collection of on-site samples, or the direct measurement of pollutants that are emitted from point exhaust stacks or process vents. These tests determine the concentrations and/or mass rates of emissions in their gaseous, aerosol, and particulate forms.

Stack testing is used to:

- Provide facility owners/operators with essential information regarding compliance with applicable permit emission limits
- Certify Continuous Emission Monitoring Systems (CEMS)
- Provide emissions data in support of process optimization projects
- Confirm vendor air pollution control equipment guarantees

To obtain timely and accurate source emissions test data, O'Brien & Gere provides key assistance with:

- Development of source test protocols
- Management and performance of field tests
- Evaluation and interpretation of test results
- Preparation of test reports

O'Brien & Gere's testing teams perform United States Environmental Protection Agency (USEPA) source testing methods, including routine tests such as relative accuracy test audits and complex multi-point tests requiring large test crews of 20 or more people. O'Brien & Gere has made a significant investment in source testing equipment and technology, including a mobile laboratory outfitted with two sets of continuous emission monitors, making it possible for multiple sources to be tested simultaneously.

ETP PROCESS

EMISSION PLANNING & METHOD SELECTION

Stack sampling can be a very complex process requiring proper planning and an understanding of specific technical needs. A project manager works directly with the client to confirm the test program, schedule field testing, conduct pre- and post-test communications, coordinate fieldwork activities, and prepare project deliverables.

CONTACT US

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For many projects, a work plan or compliance test protocol is also prepared. The test protocol often requires approval by the regulatory agencies. Both the work plan and compliance test protocol include vital elements such as:

- Process description
- Field sampling methods
- Analytical methods
- Test schedules
- Equipment calibration
- Process data
- Results presentation format

To deliver successful results, appropriate test methods and equipment must be used. USEPA and other regulatory agencies have promulgated numerous test methods for source emission testing. Several test methods can be used for various pollutants, as long as consideration is given to choosing the proper method which includes the characteristics of the exhaust gas to be sampled, the process operations, and the data quality objectives. As an example, vapor-phase pollutants can be collected in selective absorbing solutions, on adsorbing solids, or measured in real time using instrumental analyzers. O'Brien & Gere's source testing staff has the knowledge and experience to select the appropriate test methods, and has successfully developed and validated methods for challenging process sources where no promulgated methods previously existed.

FIELD TESTING

Field testing is conducted by skilled team leaders under the direct supervision of the project manager. Prior to the fieldwork, the project manager will meet with the field team to review project objectives, facility safety procedures, scope of work, and specific details of the test locations. In addition, the project manager may also visit the facility prior to field testing to review the test program and test sites with facility personnel. This step helps avoid potential field testing delays due to unanticipated problems with sample location access, electrical power needs, etc.

Following completion of the field tests, the team leader will meet with the project manager to submit field data and review sample analytical chain of custody submittals and

equipment calibration requirements. The project manager then will create the emission test report, and submit the draft report to the client.

ANALYTICAL SUPPORT

O'Brien & Gere's in-house laboratory can provide analytical support to our field test projects. We have found in-house analytical capabilities allow us to better control chain of custody, improve data turn-around time, resolve problems quickly, and accommodate special sample archive requirements. Furthermore, our laboratory also is accredited by the American Industrial Hygiene Association.

THE SOLUTION

With an established history of solving the most intricate air quality problems, O'Brien & Gere is highly-qualified to assist clients in monitoring pollutant emissions, and taking a proactive approach in meeting their engineering, environmental, and regulatory considerations involved with minimizing pollutant emissions.

