



Air Emission Testing & Test Management Capabilities

Trial Burns, Compliance Tests, and Other Emissions Testing

Focus assists clients in planning and conducting performance test programs that meet regulatory requirements and result in permit operating conditions that allow maximum operational flexibility. Focus works closely with the client's operations, regulatory, and management personnel to:



- Develop a comprehensive test plan that includes effective test operating protocols; sampling, analysis, and monitoring methods; and appropriate quality assurance and quality control procedures (QA/QC)
- Assist in permit negotiations and in preparing responses to questions from the regulatory agencies
- Provide complete services to manage the successful implementation of the test program and prepare complete and accurate test reports covering the sampling, analysis, QA/QC, and process operations.

Approach

Focus' goal is to execute any test program properly and completely the first time. Test strategy is key so the compliance testing is conducted in concert with the facilities' overall operational and compliance objectives. This strategy includes selecting the unit operational targets and test conditions with the correct overlay of sampling and analysis so the regulatory compliance objectives are achieved and the resulting test-determined limits will not inhibit future unit operations. Focus leads clients through the process of developing the compliance test strategy that integrates

best with the compliance objectives and the plant operational philosophy.

Test Planning

Focus begins the test planning process by incorporating the regulatory requirements with the client's safety, operations, and compliance objectives obtained from the test strategy. The final test plan delineates the operational targets and associated sampling and analysis for each test condition, and how the test results will be translated to final operating limits. The final document provides a basis for any post-test or future negotiations with the regulatory agency in determining the acceptability of the test data and establishment of the final operational limits.

Trial Burns, Compliance Tests, and Other Emissions Testing
Test Planning
Pretesting
Surrogate Spiking
Test Management
Test Execution
Test Reporting
Engineering Tests
Permit Negotiations and Support

Pretesting

In many cases, pretesting is recommended. Pretesting serves as a dress rehearsal for all aspects of the formal test and provides data on exactly where the system stands with regard to compliance. Going through the steps of pretesting exposes and identifies operational, logistical, sampling, or analysis issues. The pretest data may be used to fine-tune the test plan or strategy with regard to the operational targets, sampling and analysis protocols, spiking, etc. Pretesting minimizes the potential for problems or difficulties occurring during the formal test, failure to complete the formal test, and surprises in the test results. Were possible, pretest data can serve as formal test results.

Surrogate Spiking

When native waste has characteristics that can achieve the test objectives, this is the ideal and simplest approach. However, when this is not the case, Focus develops a spiking strategy and plan to enhance the waste material to achieve the characteristics that will



best demonstrate compliance. This must be done while achieving the final operational parameter limits necessary for the long-term safe, efficient, and

compliant operation of the system with sufficient operational flexibility such that production is not adversely affected. Focus' approach to selecting surrogates and spiking logistics, and the associated overlay of sampling and analysis is based on years of testing experience and revolves around the overall testing strategy. Representativeness, compatibility, logistics, cost, performance targets, and detection limits are all considered in developing the surrogate spiking plan.

Test Management

Focus is flexible and adaptable to the client's particular situation in developing a testing approach. Focus can provide test management services ranging from turnkey to integration with the client's existing contractor relationships. Focus, through a network of

associates developed over many years of testing, can assemble a test team encompassing emissions testing firms, spiking contractors, and analytical laboratories to execute the test. In situations where a facility has working relationships with particular service providers, Focus will serve as the client's test manager and assist the client in communications, organization, scheduling, and management of the test team. As necessary, Focus can access the network of providers to augment the existing service providers. These services can be provided contractually through Focus, or contracted directly by the client and under the technical direction of Focus during testing. Regardless of how the test team is assembled, Focus delivers successful test outcomes.

Test Execution

Focus' hands-on participation assures that the system is operated at the appropriate conditions and that all test preparations of the system have been made. The testing will be managed on-site by an experienced Focus testing engineer who is present during the entire testing process. The Focus engineer coordinates between the plant management and supervision, system operators, regulatory observers, spiking suppliers, and emissions testing personnel to achieve a smooth and seamless test execution. Focus oversees the testing activities to assure the target operating parameters are demonstrated and that all the samples specified by the test plan are appropriately captured, labeled, preserved, stored, and transported for analysis. Focus works to identify and resolve any test plan deviations in a way that will be mutually acceptable to the regulatory and facility personnel, and in order to preserve the integrity of the test data.

Test Reporting

In order to demonstrate that the control system is operating in compliance with the regulations and that the test objectives were met, the information and data collected during test execution must be reduced, summarized, and effectively communicated in the final report. Focus' team verifies the calculations, validates that the data meets quality objectives, reviews the information to assure that the test meets the objectives and strategy set out at the start, and translates the test results into operational limits. Testing documentation

allows an independent reviewer to reproduce and understand exactly how every result presented in the final report was determined. The final test report will identify and discuss any significant deviations in the sampling, analysis, QA/QC, or operational targets so that the issues are identified and their impacts on the test results or determinations are evaluated, understood, explained, and resolved with the client and the regulatory agency.

Engineering Tests

Focus applies the same attention to detail in providing engineering tests, often performed to collect data for new regulations or in support of new equipment where site acceptance testing is required as part of the equipment contract.

Permit Negotiations and Support

When required, Focus supports clients through the public notices, public meetings, and agency negotiations in order to obtain the best possible permit for the client.

COMPANY PROFILE

Focus Environmental, Inc. (Focus) is an employee-owned environmental engineering consulting firm located in Knoxville, Tennessee. Focus specializes in providing engineering and regulatory compliance services for applications involving combustion, waste treatment, and emissions control equipment. Examples of equipment for which Focus has provided services include hazardous waste incinerators, boilers, industrial furnaces, thermal desorbers, glass furnaces, aluminum furnaces, and cement kilns. These services include process engineering, operations support, regulatory compliance support, regulatory compliance testing, and general industrial regulatory compliance support. Focus also supports fixed-based industrial facilities and transportable units used for the thermal remediation of contaminated soils and sediments.

FOCUS HISTORY

Focus was established in 1988 and has successfully completed over 1,500 projects for more than 400 clients in the chemical, petrochemical, pharmaceutical, explosives, ammunition, metallurgical, biomedical, automotive, textiles, minerals, aluminum, and waste management service industries. In addition to work in these industrial sectors, a number of projects have been completed for site remediation contractors, utilities, and government agencies. These projects have been conducted throughout the United States in all 10 EPA regions, located in 47 states, and internationally in 21 countries.

DEMONSTRATED PROFESSIONAL QUALIFICATIONS

We offer our clients a unique blend of technical expertise, regulatory compliance insight, and practical hands-on operating experience. Focus staff includes experienced engineers and scientists with degrees in chemical, civil and environmental engineering, and in environmental science. All of Focus' engineers hold either PE or EIT certifications. Focus' senior principals average over 30 years of experience in the environmental field.

Please contact us if Focus can assist you with your compliance requirements.



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