EVALUATING THE TESTING FIRM'S REPORT CAPABILITIES

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The test report is the final product of the air emissions testing program. In many cases, it can be the most complex of the procedures necessary for a successful test program. After sample analysis, it is certainly the most time-consuming process and the process most susceptible to human error. Unfortunately, many environmental testing firms place little emphasis on the test report phase of an emissions testing program. The following are key variables to look for when evaluating a firm's report writing capabilities.

REPORT FORMATS

At a minimum, the testing firm should offer three report formats from which to choose. These designs should consist of the full report for compliance purposes, a report brief for engineering purposes, and a letter report designed to assess only the most important information.

A full report should be comprised of the following: an introduction with a test log detailing the entire scope of the test program; a summary of results followed by run-by-run test summary tables; a process description; an air flow schematic and test location drawings; a detailed description of all sampling and analytical procedures; and a description of all Quality Assurance/Quality Control measures.

Appendices must provide all test results with example calculations, field and analytical data, and complete calibration data. The full report should be modeled after EPA guidelines to guarantee acceptance by any regulatory agency. The production of this report can be time-consuming and costly, so the time frame and cost for the report production should be disclosed in a testing firm's response to an RFP.

Designed for engineering purposes, a report brief should be a scaled-down version of a full report. Only brief descriptions of the test program, a summary of the results, and the sampling and analytical procedures need be included in this report format. Appendices should provide test results, field and analytical data, and calibration data. This reduced version of the full or compliance report saves the contracting firm both time and money, while still obtaining all information necessary to perform engineering analysis and optimizations.

The letter report is comprised of the most important information, usually the test results only. Obviously this report is designed to provide quick, easy access to results for internal purposes only.

EFFICIENT TURN-AROUND TIME

There are several steps a contracting industry can take to guarantee their testing firm will provide the timely turn-around of the test report. The first and most obvious of these steps is to ensure the testing firm is capable of collecting and analyzing samples using the quickest methods possible. This may include on-site data analysis producing real-time results or quick-turn-around analysis.

In addition to state of the art sampling and analytical procedures, the testing firm should employ a full complement of qualified report writing personnel. Qualified personnel should have access to automated procedures in order to expedite the production of a test report. By reducing the chance of human error, automation allows for efficiency and quality control.

Report writers should be able to draw from glossaries written by technical experts. These glossaries, at a minimum, should include standardized report formats and descriptions of all frequently used EPA Methods. In addition, spreadsheet templates should be available to the report writer to reduce data and generate concentrations and emission rates.

The process of reducing isokinetic sampling data can be greatly shortened with the design and implementation of database software. Field lab-top computer models can be imported into such systems electronically and thus, the data reduction entails only verifying the figures against the field data sheets. This system eliminates input errors and greatly reduces process time. Certain laboratory results may also be imported electronically and processed by such a system. Although these systems are quite sophisticated, once designed and installed, they are relatively simple to operate with error-free results.

QUALITY CONTROL/QUALITY ASSURANCE.

The quality control system of a testing firm's report writing process is critical. A formal QA/QC department should work hand in hand with the report writing department on every project. The technical expertise of the people implementing quality control procedures is imperative; all calculations and the technical content should be scrutinized by experienced persons.

Quality control checks should be implemented throughout the production process beginning with the professional editor. An editor, knowledgeable in all test methodologies, is essential for the production of the text. He or she should be able to review the report for completeness, accuracy, and consistency. The project manager should also review every report for technical content.

In addition, the Quality Assurance Manager should supervise all data reduction and calculations. This person should not only be able to guarantee the accuracy of the numbers, but give them a qualitative review and flag inconsistencies or anomalies. This qualitative analysis should, in turn, be addressed in the text of the report.

Whether for compliance or engineering purposes, the

air emissions test report is the reference document for vital corporate environmental decisions. The flexibility of report design, the timeliness in which a report is produced, and the care taken to provide an accurate document are three considerations industry can evaluate when hiring an emissions testing firm.