



# **ENTECH Services Inc.**

*Pollution Control System Evaluation and Source Emissions Testing*

## **Accreditation and Regulation in the U.S. A Stack Tester's View Presented by: J Sutton, Entec Services, Inc.**

### The Presenter

Mr. J Sutton has been President of Entec Services since 2004. Mr. Sutton is a mechanical engineer with over 30 years of industrial experience primarily in the electric utility field. Immediately prior to joining Entec, J was employed by Mirant, a U.S. energy company, where Mr. Sutton was European Technical Director. Mr. Sutton was involved in developing projects throughout Europe but was primarily concerned with power generation projects within Italy. While in this position, Mr. Sutton had extensive dealings with Italian regulatory, environmental and political authorities at both the local and national level.

### Background

Over the past several years, Entec has been dealing with the disjointed, unclear and evolving U.S. accreditation rules. The accreditation of source emission testing companies in the U.S. has a long and somewhat convoluted history stretching back to the early 1970's. In 1970, Congress passed major revisions to the Clean Air Act which instituted some of the first testing requirements for industrial sources in the U.S. In 1976, some of the early pioneers in the field, all which were involved in developing test methods for EPA, started an organization known as SES (Source Emissions Society). The original intent of the organization was to develop accreditation standards for the stack testing industry. Over the years, several efforts have been made to develop and implement standards for individuals and corporate accreditation for stack testing companies. The most serious attempt was in the mid-90's, when EPA announced that it would task NELAC (a laboratory accrediting body) with instituting an accreditation program for stack testing. The effort failed after tremendous resistance from the stack testing community to being subjected to controls instituted by a laboratory accrediting body. In the absence of national standards, several states implemented their own rules regarding accreditation, for example Louisiana placed stack testing companies within its jurisdiction under the authority of LELAP which was accredited through NELAC. Entec has had to deal with individual certification programs (QSTI), state-level company accreditation programs (LELAP) and newly proposed national accreditation standards (ASTM D7036-4). The paper details the various entities involved in accreditation, the requirements for becoming an accredited testing body and the current status of the accreditation process.

## Accreditation Alphabet Soup

### **ASTM D 7036-4**      *Standard Practice for Competence of Air Emission Testing Bodies*

Establishes general criteria for a quality system that, when followed, helps ensure consistently acceptable data quality from an AETB. This is the standard that governs the accreditation of source emission testing companies.

### **AETB**                      *Air Emissions Testing Body*

An entity that adheres to and meets the requirements of the ASTM D 7036-4 standard. Stack testing entities become AETBs by adhering to the ASTM standard.

### **STAC**                      *Source Testing Accreditation Council*

STAC developed and administers a program to accredit stack testing companies to the ASTM D7036 competency standard.

### **SES**                      *Source Evaluation Society*

A non-profit association of source testing professionals. The Qualified Source Testing Individual (QSTI) program is conducted by the Source Evaluation Society (SES) as a service to the source testing industry.

### **QSTI**                      *Qualified Stack Testing Individual*

Qualified Stack Testing Individuals are those that have successfully passed a relevant exam and have had their abilities assessed to determine whether the candidate demonstrates knowledge and the ability to apply source testing methods and fundamental engineering and chemistry principles in a manner consistent with that of a field test team leader. The SES QSTI program is one way for individuals to satisfy requirements for the accreditation standards (e.g., ASTM D7036-04).

### **TNI**                      *The NELAC Institute*

TNI exists to help maintain and promote a system for the accreditation of entities directly involved in the generation of environmental data. TNI is expected to have an active role in accrediting STAC.

### **LELAP**                      *Louisiana Environmental Laboratory Accreditation Program*

A state (Louisiana) based accreditation authority. LELAP is currently one of only 13 accreditation bodies recognized by The NELAC Institute (TNI). Source testing companies operating in Louisiana must have LELAP accreditation.

### Basic AETB Requirements (as identified in the ASTM D7036-4 Standard)

- Shall have a structure, including a quality system that enables it to continually monitor and improve its ability to deliver its scope of services. This ability shall be measured by performance data.
- Shall be clearly defined including its place in any parent organization, and the relationships between quality management, technical operations, and support services.
- Shall have in place a system to collect and document performance data from all relevant sources.
- Provide its employees with the resources and authority to initiate corrective actions and to verify and document their effectiveness.
- Be legally identifiable
- Be organized so that staff members are not subject to undue pressure or inducement that might inappropriately influence their judgment or results of their work, including quality issues.
- Be organized so that confidence in its independence of judgment and integrity is maintained at all times.
- Be organized so that staff members are aware of both the extent and limitations of their responsibilities.
- Provide adequate supervision of technical staff, including trainees, by persons familiar with relevant methods and procedures, the purpose of the test project, and with assessment of testing results. Only qualified individuals may supervise a test.
- Have a technical manager who has overall responsibility for the technical operations of the AETB and has demonstrated competence in air emissions testing activities through education or professional experience, or both.
- Have a quality manager who has responsibility for the quality system and its implementation. The quality manager shall have authority and responsibility for ensuring that the requirements of this practice are implemented and maintained. The quality manager must have direct access to the highest levels of management at which decisions are made on policies affecting the AETB.
- *Have a qualified individual on-site for each test project who is qualified for each test method performed.*
- Be able to provide documentation on request from the persons or organizations evaluating its competence that it complies with the relevant and appropriate federal, state, and local requirements for conducting testing procedures under its scope, including compliance with this practice.
- Be able to provide documentation on request from the persons or organizations evaluating its competence, that it complies with applicable local, state, and federal requirements governing health and safety, transportation, shipping and other relevant requirements.

### Current Status of Accreditation Process

Since 2005, several items have been resolved that make it appear that accreditation is finally going to happen: there is an accrediting standard (ASTM D 7036-4), there is an organization to provide accreditation (STAC), there is a process for certifying individual stack testers (SES/QSTI) and an EPA Rule has been issued which will require adherence to the U.S. acid rain regulations (40 CFR Part 75). However, there are concerns about each and their connection to each other.

### **ASTM D7036-4**

The standard was issued by ASTM in 2004. However, at this time there is no entity that can provide “full” accreditation under the standard nor is there any federal regulation requiring a company to be accredited under the standard.

### **STAC**

STAC has been providing interim accreditation under the ASTM standard since 2005. It needs to itself be accredited in order to provide full accreditation to source testing companies. To date, only nine companies have received interim accreditation from STAC.

### **TNI**

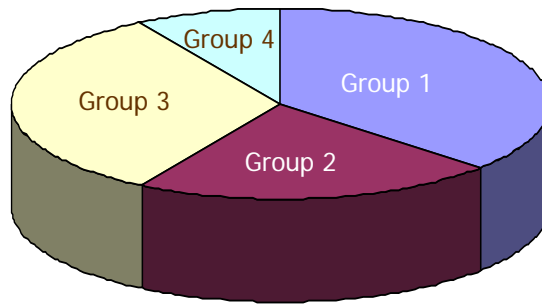
In 2008, TNI began taking steps to provide the accreditation that STAC needs so that it can provide full accreditation.

### **QSTI**

SES initiated the QSTI program in 2003 and rolled out the first set of exams (Group 1 - isokinetic test methods and Group 2 - wet chemistry test methods) in 2004. In subsequent years, exams for instrumental gaseous test methods (Group 3) and hazardous metals test methods (Group 4) were added. The following statistics were valid as of January 2009:

Exams Administered	2520
Individuals Tested	760
Exams Passed	1415
QSTI Approvals Granted	640
No. of Qualified Individuals	270
Organizations	100

***8 Entec employees have received 19 separate QSTI certifications***



Methods Group Approvals Distribution

### **EPA Part 75 Rules**

In 2008, EPA issued revisions to its Part 75 rules which included a requirement that entities that conduct testing on these sources must adhere to ASTM D7036-4 standards. This requirement was stayed by EPA after Utility Air Regulatory Group (UARG) filed a Petition for Review primarily claiming that EPA could not by the AETB requirement hold utilities responsible for something they cannot control. Although it appears the issue has been resolved, EPA has yet to issue new rules.

### Remaining Issues

As of today, there are still many unresolved issues. Most pressing is the lack of an established authority to accredit the accreditor (STAC). STAC currently has no entity which sanctions its activities. The most likely entity at this point in time appears to be TNI (The NELAC Institute). Part of the issue revolves around how field audits will be conducted.

The revisions in Part 75 dealing with have been stayed by legal actions and have yet to be re-issued. EPA expects to revise and finalize these rules shortly. Once the new rules are in place, stack testing companies that conduct tests on sources regulated by 40 CFR Part 75 must be accredited under the ASTM standard.

It is not yet clear how national accreditation will impact state requirements. It is possible that accredited companies that operate in some states (Louisiana with LELAP) may have to maintain accreditation under two separate authorities and be held to two separate accreditation standards. There is work underway to convince these states to accept national accreditation.

A major concern for many stack testing companies is the unlevel playing field that will exist for companies that achieve accreditation. Once a company becomes an Air Emissions Testing Body, that company is required to apply those standards not only to Part 75 testing but to all testing that the company conducts. Compliance with the standard will increase the cost of conducting business for these companies. Companies that are not accredited will be allowed to continue to conduct compliance and other emissions testing on non-Part 75 sources.

Overall, there is still a great deal of resistance from the stack testing community regarding the entire accreditation process. Most of these deal with time and cost of complying with the standards. Until such time as EPA issues revisions to all of its standards, many of these companies will choose not to become accredited. This will in effect create a two-tiered structure among source testing companies.

### Summary

As with most other source testing companies, Entec has taken a wait-and-see approach to AETB accreditation; although, Entec is in the process of implementing the requirements of the ASTM standard. Entec has taken an aggressive stance towards QSTI certification and has incorporated the program into its training and promotion practices. Entec has a branch office in Baton Rouge, LA, which is currently accredited under LELAP. The route it takes towards final AETB accreditation depends on how the issues identified above are resolved. The company is trying to avoid a situation where it will be subjected to two different accrediting bodies and two different standards: LELAP and STAC. Overall, EPA's timing and the requirements of the Part 75 standard will drive much of the decision making. Based on EPA's current outlook, it is expected that the new Part 75 rules should be issued within the next 6 months. This should help drive the resolution of the other remaining issues.