

QI (Qualified Individual) versus QSTI (Qualified Source Testing Individual)

Qualification, Certification, and Accreditation

What are the Differences?

Many people get the terms qualification, accreditation, and certification confused, especially when the terms are seemingly used interchangeably. The purpose of this note is to clarify use of the terms in the context of the SES qualified source testing individuals and the ASTM D7036-04 air emissions testing bodies accreditation programs. By definition, **accreditation** is a procedure by which an authoritative body gives formal recognition that an organization or person is competent to carry out specific tasks. The procedure carries criteria that address administrative, quality, and technical systems (e.g., verified established practices for a testing company or laboratory) with a focus on operations, performance, and competency. An accreditation may involve auditing. In contrast, **certification** or **qualification** refers to the confirmation of certain characteristics of a person or an organization. This confirmation is often, but not always, provided by some form of external review of education, knowledge, and experience as meeting minimum qualifications of related experience documentation and knowledge testing.

For the purposes of the source testing industry, SES applies the term qualification to individuals and accreditation to organizations and testing companies. SES does not use the term certification for qualified individuals as is consistent with the ASTM D7036-04 standard.

SES only provides qualification to individuals and does not provide accreditation to companies.

So, are you a QI or are you a QSTI?

The qualified individual or QI. According to the ASTM D7036-04 practice, a qualified individual is one who meets specific experience requirements, passes an emissions testing knowledge exam, and agrees that all test projects conducted under his/her supervision will conform to the organization's quality manual required by the ASTM practice. If an exam is not available through an outside source (such as the qualification exams the Source Evaluation Society provides), the individual may take and pass an internal exam that the company provides. The individual must have at least one year of experience or have participated in at least ten tests for each method group. You probably should review the requirements for a qualified individual in ASTM Standard D7036.04.

The SES qualified Source Testing Individual or QSTI. The Qualified Source Testing Individual is a person who has passed one or more of the exams and has elected to participate in the SES QSTI/QSTO program. The program is based on the requirements of ASTM D-07036.04, but also requires a person to submit an application, two project descriptions per group for which a qualification approval certificate is being requested, and three references. The package is submitted to the QSTI/QSTO Review

Committee and if approved, a QSTI qualification approval certificate is issued for each group for which you have been approved. If you are applying for a Qualified Source Testing Observer certificate, the same process is required. If you receive a QSTI, you are qualified to be a QSTO – a separate certificate is not necessary. This is not true for a QSTO. A QSTO cannot be a QSTI. Please note, however, that a QSTI qualification approval does not mean you are a team leader. That designation is one that a company must make internally.

Your exam grade(s) are good for five years at which time you will need to re-take the exam(s). Your qualification approval certificate(s) is good for five years, at which time you will need to renew your certificate(s). The timing on the exam grades and qualification approval certifications may not be the same. The individual needs to keep track of the dates and make arrangements to re-take their exam(s) and renew their certificate(s).

At present, the SES offers exams for four groups (as listed below:

Methods Covered Under Each Group Exam (Updated 10/2016):

Group One Exam (first available March 2004) – updated April 2010 (40 correct answers needed for a passing grade) Manual Gas Volume and Flow Measurements and Isokinetic Particulate Sampling Methods to include: U.S. EPA Methods: 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 2H, 3, 3B, 4, 5, 5A, 5B, 5D, 5E, 5F, 5I, 17, 19, 201A and 202, 40 CFR part 60.8(f), 40 CFR part 63.7(e)(3), and the SES Exam Guideline (<http://www.sesnews.org/GuideQSTIExamSuccessv4.rtf>).

Group 1A Exam (first available March 2013) – (50 questions – 40 correct answers needed for a passing grade): *Stack Gas Flow Rate Measurements Sampling Methods* to include Methods 1, 2, 2A, 2C, 2D, 2F, 2G, 2H, 3, 3B, 4 (including references to Method 5 DGM calibration procedures), 19, 40 CFR part 60.8(f), 40 CFR part 63.7(e)(3), and the SES Exam Guideline (<http://www.sesnews.org/GuideQSTIExamSuccessv4.rtf>).

Group Two Exam (first available March 2004) – updated 12/2/08 (50 questions - 40 correct answers needed for a passing grade): Manual Gaseous Pollutants Source Sampling Methods to include U.S. EPA Methods: 1-4,3B, 6, 6A, 6B, 7, 7C, 7D, 8, 11,13A, 13B, 15A, 16A, 19, 26, 26A, 202, 40 CFR part 60.8(f), 40 CFR part 63.7(e)(3), and the SES Exam Guideline (<http://www.sesnews.org/GuideQSTIExamSuccessv4.rtf>).

Group Three Exam (first available March 2005) – 12/2/08 (50 questions - 40 correct answers needed for a passing grade): Gaseous Pollutants Instrumental Methods - Methods 1-4, 3A, 6C, 7E, 10, 10B, 20 and 25A (Methods 3A, 6C, 7E, 19 and 20, as revised April 28, 2006). Also included are CEMS Performance Specifications (PS) 2, PS3, PS4, PS4A, PS5, PS6, PS7, PS8, and PS15, the CEMS RA requirements of part 75 including appendices A, B, and E, 40 CFR part 60.8(f), 40 CFR part 63.7(e)(3), and the SES Exam Guideline (<http://www.sesnews.org/GuideQSTIExamSuccessv4.rtf>) and **U.S. EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (Revised May 2012), EPA 600/R-23/531, sections 2.1.1 – 2.1.3, and the fundamental procedures, relationships, and methods described above.**

Group Four Exam (first available March 2007) – 12/2/08 (50 questions - 40 correct answers needed for a passing grade): Hazardous Metals Measurement Methods to include: 1-4, 12, 19, 29, 30B, 101, 101A, 102, and ASTM D6784-02 (The ASTM Method may be purchased from ASTM at <http://www.astm.org>.), 40 CFR part 60.8(f), 40 CFR part 63.7(e)(3), and the SES Exam Guideline (<http://www.sesnews.org/GuideQSTIExamSuccessv4.rtf>).

Group Five Exam (first available March 4, 2012) (50 questions - 40 correct answers needed for a passing grade): *Part 75 CEMS RATA Testing* . Methods to include sampling measurements and relative accuracy determinations are as required by Part 75. Methods and other supporting materials covered in this Group 5 will be **Methods** 1- 4 (including but not limited to Method 2F, 2G, 2H, and 3B), 6C, and 7E;

Part 75 Appendix A, Sections 3, 6, and 7; and sections 3 and 8 of the Part 75 Emissions Monitoring Policy Manual. **See also related sections in 40 CFR part 60, appendix B, Performance Specification 2 and the U.S. EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (Revised May 2012), EPA 600/R-23/531, sections 2.1.1 – 2.1.3.** Candidates may bring copies of the associated reference materials to the exam session along with a calculator with trigonometric functions. *(Note: revised language highlighted as of 2/14/2013).*

If you have any questions about the QSTI/QSTO program, please contact Theresa Lowe at qstiprogram@gmail.com