



An Overview of ASTM D7036: A Quality Management System for Emission Testing

NCASI West Coast Regional Meeting
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Presentation Covers Six Key Areas

1. Introduce ASTM D7036 *“Standard Practice of Competence for Air Emission Testing Bodies”*
2. Discuss ASTM D7036 within the context of the Minimum Competency Rule (MCR)
3. Explain MCR Relevance to Some Forest Product Sources
4. Present the Essentials of ASTM D7036-04 Conformance
5. Discuss Air Emission Testing Body (AETB) Options for Asserting Conformance
6. Provide Guidance on Evaluating AETB Conformance

What is ASTM D 7036?

1. A quality management standard applicable to firms that conduct source testing
2. A consensus standard based on ISO17025, *General Requirements for the Competence of Testing and Calibration Laboratories*
3. A requirement for source testing firms that perform Part 75 emission testing programs beginning 3/27/2012
4. An important option for AETBs and sources wanting to improve emission testing data quality

EPA Reports Problems with Source Test Data Quality

Preamble to Final Rule for Minimum Competency Requirements for Air Emission Testing:

- “EPA believes the evidence is strong that unqualified, under-trained and inexperienced testers are routinely deployed on testing projects.”
- “There are many reasons why voluntary compliance has not worked, including disagreement among stack test companies on a minimum competency standard, and the sources’ often used practice of hiring the lowest bidder.”

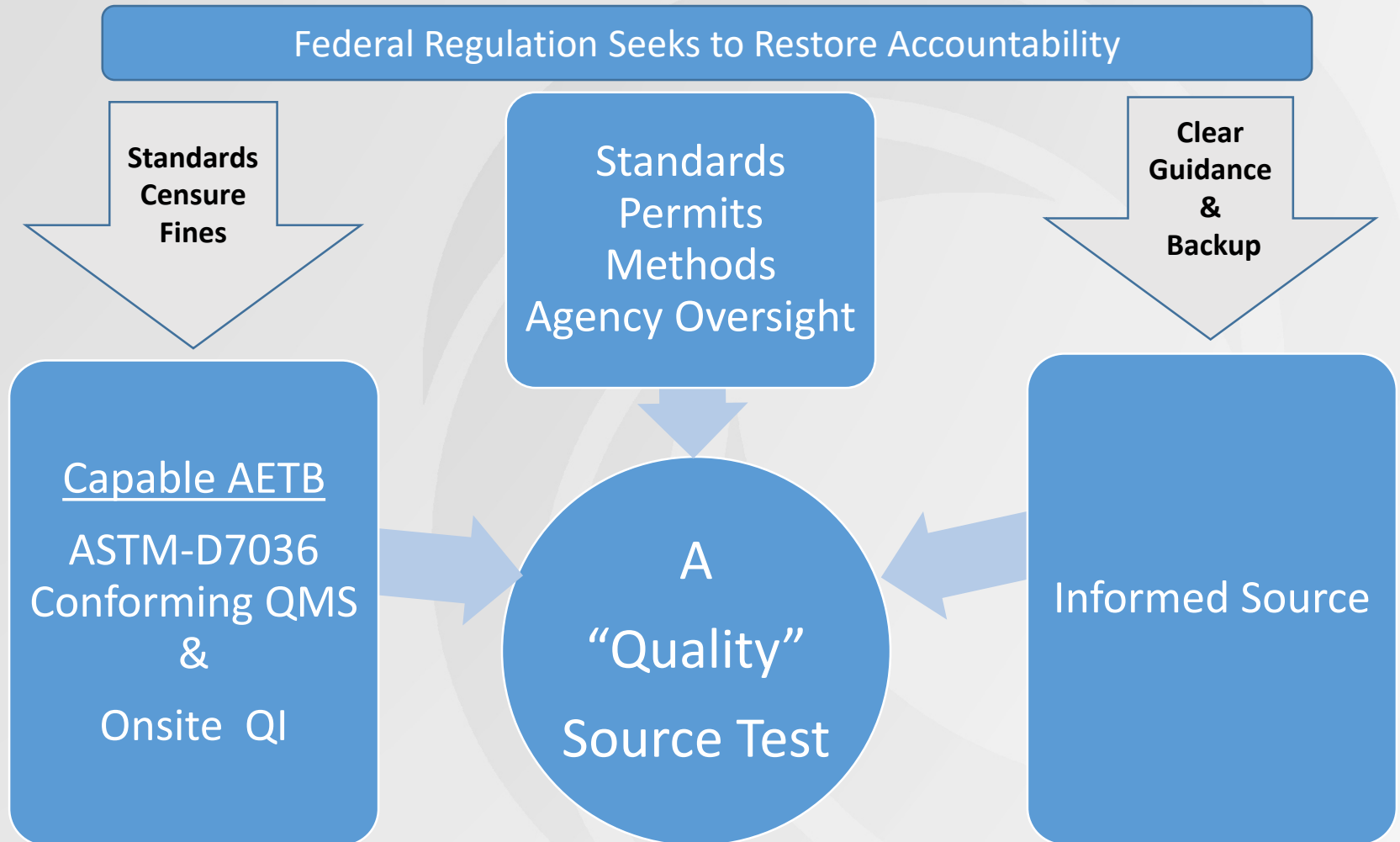
But regulatory oversight has changed too.

- Shrinking budgets mean:
 - Less observation, electronic reporting
 - Delayed, and less critical report reviews

Minimum Competency Rule Establishes Two Requirements to Address Data Quality

1. AETB Statement of Conformance to ASTM D7036-04
 - Can be limited to only Part 75 work, but this is not Stack Testing Accreditation Council (STAC)/A2LA policy
2. Qualified Individual (QI) onsite for test program
 - Proof of QI claim
 - Endorsement of Source Evaluation Society Exams for qualification

AETB Minimum Competency Rule Imposes Federal Law to Improve Source Test Quality



How Does this Affect Forest Product Sources?

- The NO_x SIP call established NO_x budgets for non-Electric Generating Units (EGUs).
- A non-EGU source with an NO_x budget had to demonstrate compliance using Part 75 test procedures instead of Part 60 test procedures.
- Part 75 test programs require that the emission testing firm conform to ASTM D7036.
- Although the budgets established by the NO_x SIP call have essentially disappeared, testing still has to be performed in accordance with Part 75 requirements.
- The application of ASTM D7036 can improve Part 51, 60, and 63 test programs.

Long Path to Minimum Competency Rule Promulgation

Date	FR Reference	Scope
8/22/06	FR 71, 49254	EPA Proposed Amendments to Part 75 Regulations to Require Source Testing Firms Meet ASTM D7036-04
1/24/08	FR 73, 4311	Final Rule Initially Promulgated with Effective Date of 1/1/09
11/4/08	FR 73, 65554	Rule was Stayed
6/10/10	FR 75, 33397	Rule was Re-proposed
3/28/11	FR 76, 17288	Rule was Promulgated with Compliance Date 12 Months after Publication in FR
3/27/12	---	Part 75 Test Programs Must be Performed by AETBs that Conform to ASTM D7036-04 ¹

¹Minimum Competency Rule applies to all Part 75 RATAs, Appendix E, and LME stack tests. Routine CEMS operations & maintenance activities, including CGAs, are exempted from requirement.

What Does It Mean to “Conform to ASTM D 7036?”

- For most quality management standards, conformance is demonstrated by third party audit.
- EPA allows AETB to demonstrate ASTM D7036 Conformance in two ways:
 - Management certification letter (self-declaration)
 - AETB Management says “Our operations conform to ASTM D7036.”
 - Certificate of accreditation or interim accreditation issued by recognized, national accreditation body (AB)
 - **Interim Accreditation:** The AETB has completed a Structural Assessment and the AB has determined that the AETB has a conforming system in place.
 - **Accreditation:** The AETB has completed a Functional Assessment and the AB has determined that the AETB is operating in accordance with the procedures of its conforming system.

Foundation of ASTM D7036 Conformance

1. The AETB must have a Quality Manual (QM) that addresses requirements of ASTM D7036
2. The AETB must operate with prescribed functions
 - Technical Manager
 - Quality Manager
 - Qualified Individual
3. Test Plans are required for all projects
4. The AETB must conduct annual internal audits
5. Confirmation by management that each test program conforms to ASTM D7036

What Part 75 Sources Must Obtain from AETBs

40 CFR Part 75, Appendix A:

- 6.1.2(c) [75.59(a)(15), (b)(6), (d)(4)]
 - Name, phone number, email address of AETB
 - Name of each QI, date QI took exam, name & email of exam provider
 - (1) A certificate of accreditation or interim accreditation for the relevant test methods issued by a recognized, national accreditation body; or
 - (2) A letter of certification for the relevant test methods signed by a member of the senior management staff of the AETB.

Part 75 Sources Are Advised to Obtain

40 CFR Part 75, Appendix A:

- 6.1.2(c)
 - AETB's Quality Manual.
 - The results of any internal and external audits performed during the preceding 12 months
 - Performance data and corrective actions implemented during preceding 12 months
 - Training records for all on-site personnel, including QIs, for the preceding 12 months

Which is Better?

Self-Certification or Third Party Accreditation? ^{1/2}

- The Apparent Answer:
 - The Minimum Competency Rule says either is ok.

Which is Better?

Self-Certification or Third Party Accreditation? ^{2/2}

- The Apparent Answer:
 - The Minimum Competency Rule says either is ok.
- The Real Answer:
 - The one that stands up to scrutiny.

Verifying ASTM D7036 Implementation (1 of 2)

Element	Value	Comments
QI Credential	High Required by MCR	MCR requires credentials but there have been instances of confusion about the exam date and QSTI award date. Verify methods and actual exam date, not QSTI date.
Site-specific Test Plan	High Not Cited by MCR	Not specifically mentioned in MCR, but a requirement for all test projects per ASTM D7036-04, conformance to which is required by MCR.
Quality Manual	Low Suggested by MCR	MCR advises source to obtain. But the QM provides no evidence of implementation, plus AETB can requests treatment of QM as CBI. Instead, request copy of table of contents and completed ASTM D7036-04 Checklist. ASTM D7036-04 Checklist is available at: http://www.betterdata.org/getaccredited.htm

Verifying ASTM D7036 Implementation (2 of 2)

Element	Value	Comments
Corrective Action Log	High	MCR advises source to obtain performance data and corrective actions for past 12 months.
	Suggested by MCR	Corrective action tracking demonstrates implementation of ASTM D7036 requirements.
Training Log	Low	MCR advises source to obtain records for past 12 months.
	Suggested by MCR	The exam for the QI is valid for 5 years. The absence of training during the past 12 months may not indicate a problem.
Internal and External Audit Results	High	MCR advises source to obtain data for past 12 months.
	Suggested by MCR	ASTM D7036 requires annual internal audits. Demonstrates implementation of ASTM D7036 requirements.

MCR = Minimum Competency Rule

Summary

- ASTM conformance is more than a Quality Manual and QI on site
- Compliance means that the AETB is implementing ASTM D7036
- For non-accredited firms, verification of conformance means looking at key evidence of ASTM D7036 implementation:
 - QI exam date and methods
 - QM Table of Contents and ASTM D7036 checklist
 - Continual improvement documentation (corrective action logs, audit results, management reviews)
- For accredited firms, verification of conformance means looking at a certificate.

Thank you

Questions?

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Web Resources

Stack Testing Accreditation Council (STAC):

<http://www.betterdata.org>

Draft Part 75 Policy Manual:

<http://www.epa.gov/airmarkets/emissions/monitoring.html>

Source Evaluation Society:

<http://www.sesnews.org/index.php?q=QSTIQSTO>

ASTM International:

<http://www.astm.org/>

Key ASTM D7036-04 Citations (1 of 3)

Section 4.1, sentence 3:

The Quality Manual and its implementation shall provide the sole basis for determining the conformance of the AETB with this standard.

Section 8.3.2.3:

The Qualified Individual shall sign a statement to be kept on file with the AETB, agreeing that all tests conducted under his/her supervision will conform to the quality manual and this practice in all respects.

Key ASTM D7036-04 Citations (2 of 3)

Section 12.3:

A site specific test plan shall be used for each test project. (note that the standard describes 11 items that the test plan shall address)

Section 12.4:

The test plan, along with the AETB's quality manual, is the document against which an assessor shall perform any on-site assessment of conformance to this practice.

Key ASTM D7036-04 Citations (3 of 3)

Section 15.3.19:

The test report shall include a signed statement by a responsible individual that the AETB operates in conformance with the requirements of this practice during the test project.