



2014 MTG HIGHLIGHTS

Kim Garnett

Measurement Technology
Workshop

January 27, 2015

Test Method Update Rulemaking

2

- Revisions to over 50 Test Methods & PS
 - ▣ Published February 27, 2014 (79 FR 11228)
- Have begun work on next revisions package
 - ▣ Corrections/clarifications
 - ▣ Shooting for proposal in Summer of 2015
- Contact: Lula Melton



Test Methods

3

□ Method 2H Revisions

- Proposed on August 25, 2009 (74 FR 42819)
- Incorporated the improvements from CTM-041
 - Assessment of Wall Effects in Rectangular Ducts or Stacks
- Comments received on proposal
- Promulgation expected in late 2015
- Contact: Jason DeWees



Test Methods

4

- Methods 201A and 202 Revisions
 - Latest version promulgated in 2010 (74 FR 12970)
 - Some clarifications included in Test Method Update Package
 - New project to evaluate and propose minor changes
 - Conducted Stakeholder meetings
 - Upcoming Method 202 best practices document for measuring low concentration CPM
 - Contact: Ray Merrill, Jason DeWees

Test Methods

5

- Methods 325A&B Passive Fenceline Monitoring
 - ▣ Fugitive/area source emission concentrations
 - ▣ Proposed June 30, 2014 (79 FR 36879)
 - ▣ Contacts: Ray Merrill, Jason DeWees



CEMS Performance Specifications

6

- Performance Specification 11 Revisions and Guidance
 - ▣ Latest version promulgated in 2009 (74 FR 12575)
 - ▣ Minor issues corrected in Test Method Update Package
 - ▣ Currently evaluating a number of potential changes
 - ▣ Dependent on available resources
 - ▣ Contact: Kim Garnett

CEMS Performance Specifications

7

- PS -18 along with Procedure 6 for HCl CEMS
 - To support Portland Cement MACT and MATS Rule
 - Proposed May 14, 2014
 - Technology neutral
 - For measurement range of 0-5 ppm HCl
 - Hope to finalize in early 2015
 - Contact: Ray Merrill, Candace Sorrell



QA Procedures for CEMS

8

- Procedure 3 – QA for COMS
 - ▣ Final version published 5/16/14
 - 79 FR 2849
 - ▣ Establishes QA/QC procedures for COMS
 - ▣ Contact: Lula Melton, Solomon Ricks



Broadly Applicable Alternative Test Methods

9

- What are they?
- Latest FR Notice February 15, 2012
- Preparing notice for 2014
 - ▣ Contact: Lula Melton
- Approvals for 2014
 - ▣ Alternative Calibration Gases for Bulk Terminals
 - ▣ Alternative VOC Measurement for Engines
 - ▣ Alternative Minimum Sample Volume for Gold Mines

Other Test Methods or OTMs

10

- ❑ Not been subject to rulemaking process
- ❑ Found to be potentially useful
- ❑ Information provided
 - ▣ Field and lab validation studies
 - ▣ Peer review comments
 - ▣ QA/QC procedures
- ❑ Consider for use in federally enforceable programs
- ❑ Candidates for alternative test methods
- ❑ Encourage submission of an additional data or comments

Other Test Methods or OTMs

11

- ❑ OTM 33: Geospatial Measurement of Air Pollution, Remote Emissions Quantification
- ❑ OTM 33A: Geospatial Measurement of Air Pollution, Remote Emissions Quantification, Direct Assessment
- ❑ OTM 34: Method to Quantify Road Dust Particulate Matter Emissions (PM10 and/or PM2.5) from Vehicular Travel on Paved and Unpaved Roads
- ❑ OTM 35: Measurement of Particulate Matter and Other Heavy Metal Emissions from Electric Arc Welding Processes

Tools for Improved Monitoring and Testing

12

- Optical Gas Imaging (OGI)
 - ▣ Assess the technical underpinnings needed
 - ▣ Quantitatively determine the detection capabilities
 - ▣ Parameters of interest
 - Background vs. gas temperature
 - Homogeneity of thermal background
 - Effects of wind speed, relative humidity, gas composition
 - ▣ Contact: Jason DeWees



Tools for Improved Monitoring and Testing

13

- PM 2.5 Method Development for Wet Stacks
 - CEM method – Baldwin Environmental
 - Initial testing results were encouraging
 - More modeling of the IDS
 - Possible field test
 - Manual method – Air Control Techniques
 - Completed Method 301 testing
 - Additional testing to determine cut size
 - Contacts: Kim Garnett, Jason Dewees

Tools for Improved Monitoring and Testing

14

- Upstream Oil & Gas Emission Measurement
 - ▣ Working with EPA/ORD on approaches to quantify VOC, HAP and GHG emissions from upstream oil & gas operations
 - ▣ Allows for drive-by measurement of potential sources
 - ▣ Posted OTM 33 & 33A describing methodology in 2014
 - ▣ Supplemental information also available
 - ▣ Contacts: Jason DeWees, Eben Thoma (ORD), Robin Segall



Tools for Improved Monitoring and Testing

15

- Large Area Source Remote Measurement
 - Large area sources (e.g., landfills) exceed optical path lengths of current technologies; two new approaches
 - Addendum to OTM-010 – uses an estimated “fetch” is used to determine how much area would contribute to the flux measured
 - Described in conference paper and plan to publish
 - Release of known amount of tracer coupled w/ downwind measurement of tracer and target pollutant; emissions calculated from ratio
 - Analyze additional tracer gas data and publish protocol in 2015
 - Contacts: Jason DeWees,
Eben Thoma



Tools for Improved Monitoring and Testing

16

- Handbook for Measurement of GHGs
 - Methodologies for measuring GHGs from point & non-point sources
 - CO₂, CH₄, N₂O, SF₆, FC, NF₃
 - Presently undergoing internal review
 - Final expected sometime in 2015
 - When complete will be posted on the EMC website
 - Contact: Dennis Mikel



Tools for Improved Monitoring and Testing

17

- Nanoparticle/Ultrafine Particles Handbook
 - ▣ Current capabilities of measuring or sensing Nanoparticles (NP), nanomaterials (NM), and gas sensors
 - ▣ Raise awareness and build knowledge base of the nanoscale sensing technologies
 - ▣ A resource for federal, state and local agencies
 - ▣ Expected to be available in 2015
 - ▣ When complete will be posted on the EMC website
 - ▣ Contact: Dennis Mikel

Tools for Improved Monitoring and Testing

18

- Stationary Source Audit Program (SSAP)
 - ▣ Promulgated 8/13/2010 (75 FR 28 55636)
- EMC QA Conference Call
 - ▣ Now used as a forum for testing and monitoring issues
 - ▣ First Monday of every month at 1:30-3:00 pm (EST)
 - ▣ Contact: Candace Sorrell

Questions?

