



AIR & WASTE MANAGEMENT
ASSOCIATION

◆
SINCE 1907

Southern Section Annual Meeting & Technical Conference

Stack Testing and CEMS
(Communication and Preparation)

Clay Burton
Environmental Manager
Nucor Steel Jackson, Inc.



Stack Testing and CEMS – (Communication and Preparation)

- **Some things to consider for:**
 - **Stack Testing from the facility perspective**
New Facility/Equipment
 - **Preparing for Testing**
 - **During the test.....**
 - **CEMS**



Stack Testing and CEMS – (Communication and Preparation)

- **New Facility/Equipment to test – Where do I start.....**
 - **Design Phase Considerations:**
 - **Communication !!!** Talk w/ your engineers, regulators, and stack testing firms to understand the applicable requirements before the project starts.
 - Understand the permit behind the testing.
 - Here are a couple of links you can start with:
 - EPA Emissions Measurement Center
<https://www3.epa.gov/ttn/emc/>
 - Source Evaluation Society
<http://www.sesnews.org/>



Technology Transfer Network Emission Measurement Center

Contact Us Share

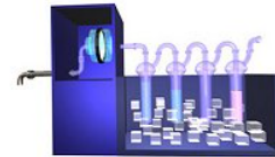
- EMC Home
- Frequent Questions
- Methods
- Monitoring
- Technical Support
- Audit Programs QA/QC
- Related Web Sites
- Instructional Material
- Upcoming Events
- Who is EMC?
- EMC Contacts
- Recent Additions

You are here: EPA Home » TTN Main » Emission Measurement Center

Emissions Measurement Center

The Emission Measurement Center (EMC) provides information on test methods for measuring pollutants from smokestacks and other industrial sources. This site compiles the test methods available for emission measurement, and EMC staff provide technical assistance in the use and application of the methods. For information on a specific test method or performance specification (method text, relevant documents, and frequently asked questions), use the pull-down menus below. For other information available on this site, use the links in the left margin of this page.

Recent Additions



Summary Pages for Test Methods and Performance Specifications

Promulgated Methods

Promulgated Performance Specifications





Source Evaluation Society

P. O. Box 12124 Research Triangle Park, NC 27709-2124

Search this site: Search

Primary links

- o [Contact Us](#)
- o [What's New](#)
- o [General Information](#)
- o [SES QSTI /QSTO Program](#)
- o [SSSAAP Conference](#)
- o [Stack Testing Companies](#)
- o [What's New at the EPA](#)
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Navigation

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Welcome to the Source Evaluation Society

The mission of the Source Evaluation Society is to advance the applied sciences relating to source evaluation with respect to air pollution and air pollution control by: (1) promoting the development of concepts and techniques relating to the field; (2) encouraging related professional development and knowledge; and (3) striving to ensure the highest professional standards by its members. The aims and objectives are:

- Developing and disseminating technical information in order to provide a continuing education to stationary source sampling professionals and technicians
- Developing industry's standards, codes, safety procedures and operating principles
- Encouraging the personal and professional development of practicing source samplers and students
- Fostering the source sampler's skill by means of an exchange of knowledge with his/her fellows
- Maintaining a body of current sampling knowledge
- Assisting in maintenance of a high level of ethical conduct
- Providing a certification program for the membership
- Seeking cooperation with other professional organizations

The next SES QSTI/QSTO Applications Review Committee meeting is scheduled for **Tuesday July 26, 2016**. Please submit your completed application no later than close of business (EST) **Friday, July 22, 2016** in order to be in the queue for review at this meeting. Applications received after **Friday July 22, 2016** will be held over for review at the next monthly committee meeting.

What's New

- [Second Quarter newsletter is out](#)
 - [First Quarter newsletter is out](#)
- [more](#)

SES News Feed



FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW

Clipboard Font Alignment Number Styles Cells Editing

Times New Roman 8 Bold Italic Underline Text Color Background Color

General Conditional Formatting Format as Table Cell Styles

Insert Delete Format Sort & Filter Find & Select

B63 : 6900 North County Road West

| | A | B | C | D | E | F | G |
|----|---|-----------------------------------|--------------|-------|----------|-------------------|---------------------|
| 1 | Company Name | Company Street Address | City | State | Zip Code | Telephone # | Contact for Testing |
| 47 | BAIR | 601 Lonesome Prairie Trail | Haslet | TX | 76052 | 817-439-4767 | Bartley, Randy |
| 48 | Barr Engineering | 5150 W. 76th Street | Edina | MN | 55439 | 952-932-2727 | Kuchinski, Tom |
| 49 | Bison Engineering, Inc. | 1400 11th Ave. | Helena | MT | 59601 | 406-442-5768 | Hiltunen, Chris |
| 50 | Broadbent & Associates, Inc. | 8 West Pacific Avenue | Henderson | NV | 89015 | 702-563-0600 | Steiner, Jim |
| 51 | BT Environmental Consulting | 4949 Fernlee Avenue | Royal Oak | MI | 48073 | 313-449-2361 | Boulianne, Barry |
| 52 | Bureau Veritas North America, Inc. | 22345 Roethel Drive | Novi | MI | 48375 | 248-344-2669 | Wong, Derek |
| 53 | Burns & McDonnell | 17 Cassens Court | Fenton | MO | 63026 | 636-492-7023 | Pichee, Nicholas |
| 54 | Burns & McDonnell | 9400 Ward Parkway | Kansas City | MO | 694114 | 913-904-2839 | Murowchick, Pam |
| 55 | C.E.M. Solutions, Inc. | 1183 E. Overdrive Circle | Hernando | FL | 34442 | 352-489-4337 | Johnson, Jeremy |
| 56 | Canomara, LLC | PO Box 941 | Simsbury | CT | 6070 | 860-865-1166 x800 | Canora, Jim |
| 57 | Catalyst Air Management, Inc. | 2505 Byington Solway Rd. | Knoxville | TN | 37931 | 865-531-0075 | Cangro, Maggie |
| 58 | CB&I | 36443 Perkins Road | Prairieville | LA | 70769 | 225-987-7679 | Pilgrim, Jason |
| 59 | CB&I | 5050 Section Avenue | Cincinnati | OH | 45212 | 513-782-4890 | Bruffey, Chuck |
| 60 | CECO | 3648 Vann Road, Ste. 128, Bldg. 2 | Birmingham | AL | 35253 | 800-836-7333 | Delatte, Bart |
| 61 | CECO | 15888 Industry Way | Walker | LA | 70785 | 800-836-7333 | Delatte, Bart |
| 62 | CECO | 5440 Alder Drive | Houston | TX | 77081 | 713-663-1805 | Delatte, Bart |
| 63 | CECO | 6900 North County Road West | Odessa | TX | 79764 | 800-836-7333 | Delatte, Bart |
| 64 | CEM Service Group, Inc. | 832 Rolling Hills Road | Ottsville | PA | 18942 | 215-795-0188 | Leuz, Michael |
| 65 | Civil & Environmental Consultants, Inc. | 4848 Park 370 Blvd., Ste. F | Hazelwood | MO | 63042 | 314-656-4566 | Folle, Bob |
| 66 | Civil & Environmental Consultants, Inc. | 1900 Center Park Drive, Ste. A | Charlotte | NC | 28217 | 855-859-9932 | Best, Quentin |

Stack Testing and CEMS – (Communication and Preparation)

- **New Facility/Equipment –**

- **Nuts and Bolts of Testing**

- Please don't assume that an equipment manufacturer will know the regulations when it comes to testing your equipment after installation.
- Understand the requirements of your permit.
- What is a legal sampling point - test port locations
- Stack/duct access (permanent or mobile equipment)
- Power requirements of testing equipment



- **Preparing for Testing**

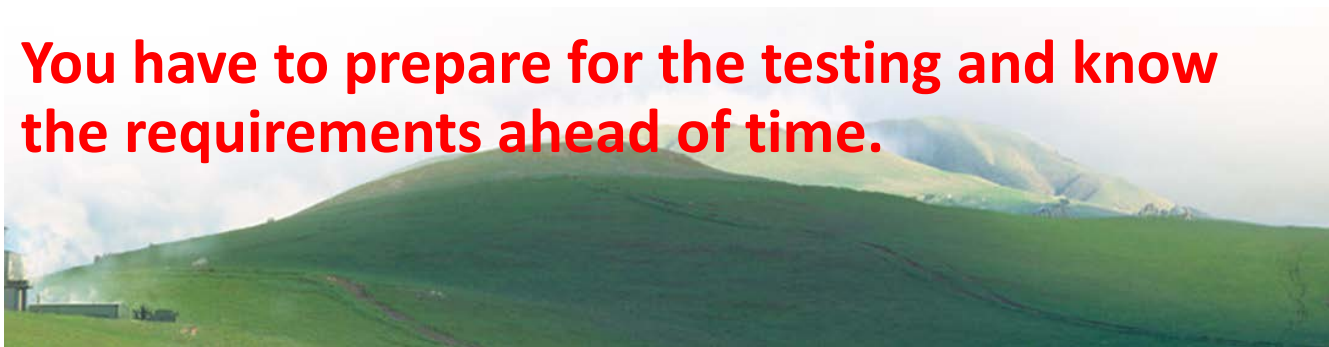
- **Flag your dates for testing far enough in advance to schedule the event to coincide with the test group availability and your production schedule.**
- **Submit Testing Protocol to your regulators (usually 30 or 60 day notice).**



- **Prepare to gather information that will be required during the test. Here is a typical list for a scrap recycling steel mill:**

- Number of Heats (batches of steel)
- Processing rate
- Scrap charge weight
- Liquid steel tap weight
- Input materials (lime, alloys, etc.)
- Heat times
- Process log
- Control device operation log
- Method 9 (Opacity Observations)
- Fan amp and damper positions (operating conditions)

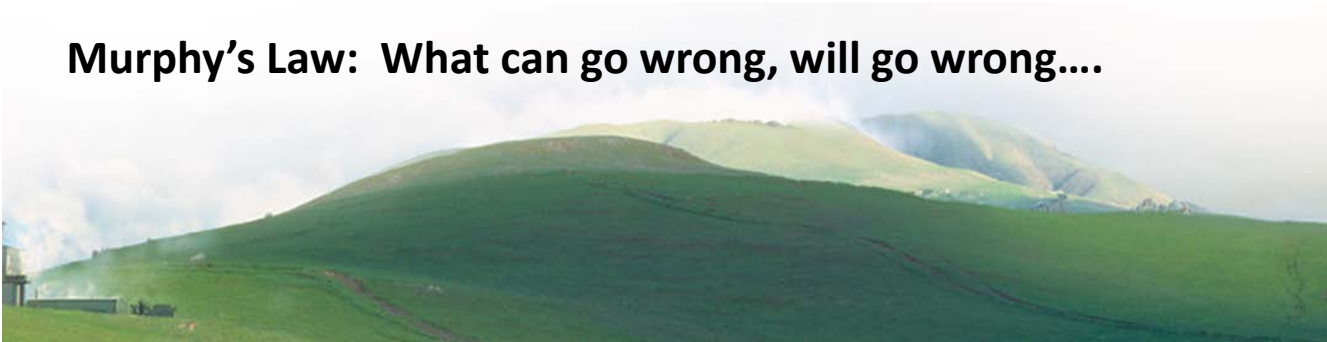
- **You have to prepare for the testing and know the requirements ahead of time.**



- **During the test.....**

- **Be present and involved with the testing crew and your operation.**
- **Make sure the information systems you are relying on for data are operating.**
- **Make sure the stack testing equipment is functioning properly and the testing crew has what they need.**
- **If issues arise during the testing, **communicate** effectively with the testing crew and your regulators.**

Murphy's Law: What can go wrong, will go wrong....



CEMS

(OMG, what do all these buttons and gauges do?)



• CEMS

New Installation

- Someone above is punishing me as I have had the experience of installing two systems at facilities where I have worked
- Regulatory Requirements (again, **Communicate** w/ Regulators and allow time to adequately **prepare** to install the system)
- Some of the topics to be conscious of:
 - Physical location of probe, sample lines, instrument shelter (power, compressed air, etc.)
 - Understanding of the process gas stream: temperature, velocity, PM loading, characteristics of flow
 - Types of instruments and how they fit your operation
 - Understand challenges of uptime (redundant systems)



- **CEMS**

- **New Installation**

- **Data collection and reporting software (it can make your life easy or make your life shorter)**
 - **System certification testing (with a Stack Testing Crew)**
 - **Daily system responsibility**
 - **Spare parts**
 - **Maintenance (daily, monthly, quarterly, yearly)**
 - **Calibration gas management**

Communicate and Prepare –How well you do these two things will have a major impact on your success dealing with stack testing and CEMS.

