

AIR/COMPLIANCE NEWS UPDATE



UNDERSTANDING MERCURY EMISSIONS AND CONTROL

JILL W. MERRILL,
PRESIDENT



Mercury in the flue gas of air emission sources can exist in three different forms: elemental, divalent oxidized or particle-bound. The Ontario Hydro Method Stack Test Method can be used to determine the total mercury and amount in all three forms. It is important to understand the form of mercury to determine the best method for capture and control. Particle-bound mercury can be removed in conventional PM control devices like baghouses and electrostatic precipitators. Divalent forms of mercury are generally soluble in water and can be collected in wet scrubbers. Elemental and divalent Mercury can both be absorbed on to porous solids like fly ash, calcium sorbents and activated carbon for subsequent removal in the particulate control device. Elemental mercury is far more difficult to remove by absorption than divalent mercury, so upstream oxidation, or the presence of an oxidizing agent like chlorine can improve the capture of mercury in downstream control devices.

EPA STUDIES MERCURY CEMS

NANCY M. HIRKO, SENIOR ENGINEER

The USEPA has released an initial draft report concerning the long-term study of several mercury continuous emissions monitoring systems (CEMS). Work was conducted by the Midwest Research Institute at a coal fired utility boiler burning eastern bituminous coal and equipped with SCR, an ESP and wet scrubber.

The report discusses the results from certification and initial relative accuracy test audit (RATA) testing of four mercury CEMS. Three CEMS were installed in November 2004 and the fourth in February 2005. The RATA consisted of 12 paired-train runs using the Ontario Hydro method (ASTM D6784-02). Testing was conducted under normal facility operations with the SCR bypassed. Another RATA is planned with operation of the SCR.

EPRI was also involved in the field studies. EPRI conducted a RATA using the paired sorbent trap monitoring approach concurrent with EPA testing. Initial certification included a 7-day calibration error test, a measurement error test, a linearity check, converter efficiency test, cycle time test and zero/upscale drift tests. Instrument span was defined as 10 ug/m³.

The field evaluation data are summarized in the table (see Page 3). Note that results from the Ontario Hydro method are not yet completed for the RATA evaluation.

Contact Nancy Hirko at nhirko@air-comp.com

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EPA CHANGING PART 75 QUARTERLY REPORTING ARCHITECTURE

EPA is currently working on a project to re-engineer the processes and data systems associated with emissions, monitoring plans, and certification data for Part 75 sources. EPA desires to create a single application for users and eliminate the current system of ETS-FTP, ETS Mainframe, and MDC to check and submit data. Multiple feedback reports will be eliminated. The new application will be of XML file format. Beta testing of the new system is scheduled for mid-2006 through 2007. After a transition year in 2008, sources will be required to report data exclusively with the new system beginning in the 1st Quarter of 2009. Additional information can be obtained at <http://www.epa.gov/airmarkets/business/ecmps/index.html>

WHAT CONSTITUTES A VALID HOUR FOR PART 75 DATA?

Question 15.30 of the Part 75 Policy Manual responds that “§75.10(d)(1) states that in order to validate data for an hour, you must obtain at least one valid data point in each quadrant of the hour in which fuel is combusted.” For hours in which quality assurance testing and preventive maintenance activities are performed, “a minimum of two data points, separated by at least 15 minutes, are required to validate the hour.”

UPCOMING PART 75 AUDITS

EPA’s Clean Air Markets Division (CAMD) has announced that they will be conducting in-depth electronic audits of 40 CFR Part 75 Appendix D (fuel flow) and Appendix E (low mass emitters) monitoring systems in the first quarter of 2006. They will focus on the QA/QC status of the systems, including accuracy tests, transmitter calibrations, and visual inspections of Appendix D fuel flowmeters and the Appendix E emission tests. EPA urges sources to be up-to-date in preparation for the audit.

For more information about USEPA Part 75, contact Nancy Hirko at nhirko@air-comp.com

TRI MODIFICATIONS

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The USEPA has modified the reporting requirements on the Toxic Release Inventory's (TRI) Form R and Form A as follows:

- Removal of Section 4.6, Part I – Latitude and Longitude Elements
- Removal of Section 4.8, Part I – EPA Identification Number(s)
- Removal of Section 4.9, Part I – Facility NPDES Permit Number(s)
- Removal of Section 4.10, Part I – Underground Injection Well Code ID Number(s)
- Modification to Section 7A Column B – The 64 Waste Treatment Method Codes will be replaced with the 18 Hazardous Waste Treatment Codes used in the USEPA Resource Conservation Recovery Act (RCRA) Biennial Hazardous Waste Report
- Removal of Section 7A Column C – Range of Influent Concentration
- Modification to Section 7A Column D – Treatment efficiencies will now be reported as a range instead of an exact percentage using 6 range codes
- Removal of Section of 7A Column E – Efficiency based on operating data
- Modification to Section 7C – The current recycling codes will be replaced with three reclamation and recovery management categories used in the USEPA RCRA Biennial Hazardous Waste Report
- Modification to Section 8.11 – The requirement to answer “Yes” or “No” to the optional section on additional information on source reduction, recycling, or pollution control activities will be replaced with an optional text box in the USEPA’s TRI-ME software



These modifications will become effective for the 2005 reporting year.
Contact Sharon Diday at sdiday@air-comp.com for more information.

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2004 Naphthalene Classification Change

The International Agency for Research on Cancer (IARC) has evaluated naphthalene and classified it as “possibly carcinogenic to humans (Group 2B)” Based on these classifications the de minimis level for naphthalene is lowered from 1.0% to 0.1% starting with the 2004 reporting year.

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OHIO EPA MAKES AVAILABLE 10 GENERAL AIR PERMITS

SHARON S. DIDAY, PROJECT ENGINEER

On July 12, 2005, the OEPA is making available, for application through the DAPC, 10 model general permits to install and model general permits to operate for:

- Boilers, Dry Cleaning Operation, Ready Mix Concrete Batch Plants, Miscellaneous Metal Parts Painting Lines, Unpaved Roadways and Parking Areas, Paved Roadways and Parking Areas, Storage Piles

A general permit is the same as a permit to install or State permit to operate that DAPC issues except all the terms and conditions of the permit have been developed in advance. This is referred to as the “model general permit”. A potential applicant can review the model general permit qualifying criteria and terms and conditions and then complete the application and sign the qualifying criteria document if they believe they qualify for that model general permit. DAPC will review the applicant’s information to confirm they meet the qualifications and then issue the model general permit to the applicant. At that point it becomes the applicant’s “general permit.” All the terms and conditions of the “model general permit” remain the same when it is issued as the “general permit.” The general permit will include a cover page that identifies facility and emission unit specific information. OEPA began accepting these general permits on July 12, 2005. Additional information can be found at: <http://www.epa.state.oh.us/dapc/genpermit/genpermits.html>

Contact Sharon Diday at sdiday@air-comp.com for more information.

PROPOSED AMENDMENTS TO IRON AND STEEL NESHAP (40 CFR PART 63 SUBPART FFFFF)

NANCY M. HIRKO, SENIOR ENGINEER

Based on petitions from five steel companies and one trade association, the USEPA proposed amendments to the NESHAP for Integrated Iron and Steel Manufacturing on August 30, 2005 (70 FR 51306). The following summarizes the proposed changes:

1. Sinter cooler emission limits have changed from a particulate standard to an opacity limitation of 10%.
2. For controlled sources that discharge inside a blast furnace casthouse, BOPF Shop or building housing the discharge end at a sinter plant, the Table 1 PM standards will not apply. The roof monitor opacity limitation will apply for that particular building.
3. For ESPs controlling a BOPF, an opacity level of 10 percent will be required for compliance.
4. If opacity limit is exceeded for ESPs or venturi scrubbers at the BOPF, facility must take corrective action within 1 hour. If exceedance continues for 24 more hours, an additional corrective action must be taken. If after 24 hours the limit is still exceeded, source must report a deviation in next semiannual report.
5. Bag leak detection systems will not be required for fabric filters without exhaust stacks. (ex., positive pressure baghouses).
6. COMS will be an allowed alternative to bag leak detection systems. Corrective action would be required if hourly average of 5% opacity is exceeded.
7. Emission units equipped with baghouses that are also equipped with a bag leak detection system or COMS would be required to conduct performance testing only once during the permit term (normally 5 years) instead of twice each permit term.
8. The definition of “ladle metallurgy” will be revised to exclude vacuum degassing operations.

EMISSIONS REPORTING REQUIREMENT TO BE EXPANDED IN OHIO

MARK S. SCHOOLEY, SENIOR ENVIRONMENTAL PM

Beginning with the 2005 report year, many additional Ohio facilities will be subject to annual Emission Statement reporting. Previously, four counties in Ohio were designated non-attainment for ozone, thus triggering the Emission Statement requirement for all facilities in those counties that had actual VOC or NO_x emissions of 25 or more tons/year. With the new 8-hour ozone standard, there are now 33 counties in Ohio that are in non-attainment (see list below). All facilities within those 33 counties, regardless of whether they are a major or minor source, will be required to submit an Emission Statement for years when actual VOC and NO_x emissions exceed the 25-ton threshold.

Additional information can be found on the Ohio EPA website, at www.epa.state.oh.us/dapc, under the featured topic, "8-hour ozone standard." A map of the affected counties is also located there. Contact Mark Schooley at schooley@air-comp.com for more information.



Ohio Counties Designated as Non-Attainment for the 8-Hour Ozone Standard:

- | | | | | |
|-----------|------------|-----------|------------|------------|
| Allen | Columbiana | Hamilton* | Madison | Stark |
| Ashtabula | Cuyahoga | Jefferson | Mahoning | Summit |
| Belmont | Delaware | Knox | Medina | Trumbull |
| Butler* | Fairfield | Lake | Miami | Warren* |
| Clark | Franklin | Licking | Montgomery | Washington |
| Clermont* | Geauga | Lorain | Portage | Wood |
| Clinton | Greene | Lucas | | |

**These counties were previously in non-attainment of the 1-hour standard*

EPA STUDIES MERCURY CEMS TABLE (CONT'D FROM PAGE 1)

Manufacturer:		Horiba/Nippon	Tekran	Thermo Electron	Forney/Genesis*
Test	Criteria				
7-Day Calibration Error Test	≤1 ug/m ³	Passed	Passed	Passed	Test not completed.
Linearity	≤10% or ≤1 ug/m ³	Test not completed.	Passed	Passed	Test not performed.
Cycle Time	≤15 minutes	Test not completed.	Passed	Passed	Test not completed.
Converter Efficiency	≤5% span	Passed	Passed	Passed	Test not performed.
Measurement Error	≤5% span	Test not completed.	Passed	Passed	Test not performed.
Zero and Upscale Drift	≤5% span	Passed - Catalyst replaced twice during 7-day period.	Passed	Passed	Test not performed.
RATA	≤20% or <1 ug/m ³ for low emitters	CEMS - Range: 1.4 – 2.7 ug/m ³	CEMS - Range: 2.335 – 3.317 ug/m ³	CEMS - Range: 1.5 – 4.0 ug/m ³	CEMS - Range: 1.71 – 2.74 ug/m ³
Sorbent Trap Data, ug/m ³	Run1: 3.0 ug/m ³ Run2: 3.4 ug/m ³	Run1: 3.0 ug/m ³ Run2: 3.8 ug/m ³	Run1: 2.695 ug/m ³ Run2: 3.325 ug/m ³		

PADEP CEM WORKSHOP Q&A

ACCI attended the PADEP CEM Workshop this past summer and posed the following question to PADEP:

It is understood that PADEP forwards quarterly CEMS/COMS reports to the EPA Region 3. Are these reports acceptable for the "excess emissions reports" as required by 40 CFR 60.7(c)?

PADEP responded that they are not quite the same and that sources should submit "excess emissions reports" separately to the EPA in the format required by 40 CFR 60.7(c).

PA CSMM REVISION 8 COMING!!

Sources in Pennsylvania should look for Revision 8 of the "Continuous Source Monitoring Manual." PADEP plans to release the draft "soon." Keep checking their web site at <http://www.dep.state.pa.us/dep/deputate/airwaste/aq/cemspage/cems.htm>. Rev. 8 of the CSMM will apply to all CEMS, COMS, flow, etc. - current and future. PADEP plans to phase in compliance with the new requirements.

COPPER SMELTING NESHAP SUBPART QQQ AMENDMENT

On July 14, 2005, EPA published an amendment to the final rule for the Primary Copper Smelting NESHAP (40 CFR Part 63, Subpart QQQ). An error in the regulatory language to the final rule referring to monitored operating parameters for use of a control device other than a bag-house or a venturi wet scrubber was discovered. Amendments were made to sections 63.1452(d) and 63.1453(e). As a reminder, the NESHAP final rule, promulgated on June 12, 2002, established emission limits and work practice standards for primary copper smelters that use batch copper converters and are a major HAP emission source. A copy of the final rule amendment is available at:

<http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/05-13871.htm>

The Ohio Environmental Protection Agency (OEPA) will host the first "Compliance Assistance Conference: Successfully Navigating Reporting, Permitting, and Inspections" on **October 18, 2005** at their Columbus, Ohio office.



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www.air-comp.com

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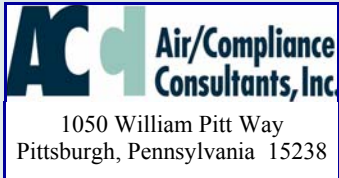
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- ◆ Emission Control and Monitoring Assistance
- ◆ NESHAP Planning (SSM Plans)