

EPA Office of Air Quality Planning and Standards Updates
Stationary Source Sampling and Analysis for Air Pollutants Conference
Panama City Beach, Florida – April 03, 2023



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MTG Staffing Updates

Happily Retired: Robin Segall (Fall 2022)

Newly Hired: Alina Brashear (Spring 2020), Dr. Paul Van Rooy (Fall 2021), David Berkowitz (Spring 2023)

Test Methods

Test Methods Update Rulemakings – We continually collect and catalogue errors and other necessary revisions to our test methods, performance specifications, and associated regulations in 40 CFR parts 51, 60, 61, and 63. Many of the revisions are brought to our attention by affected parties and end users. Our most recent test methods update rule was promulgated on April 26, 2022 (87 FR 24488). The rule includes corrections to typographical and technical errors, updates to outdated procedures, and revisions to add clarity and consistency with other monitoring requirements. The rule addresses Methods 1, 4, 7, 19, 25, 25C, 26, 315, and 323; Performance Specifications 1, 2, 4B, 6, 12A and 16; and Procedures 1 and 5 of Appendix F.

Contact: Lula Melton, MTG, melton.lula@epa.gov

Broadly Approved Alternative Test Methods – These alternative test method approvals, published on the EPA/EMC website at <https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods>, are broadly applicable alternatives to the methods required under 40 CFR parts 59, 60, 61, 63, and 65 as set forth in the General Provisions and/or subparts therein. As such, they may be used by sources for determining compliance with the requirements of these parts as per the applicability provisions specified in the approval without further EPA approval; however, the approval letter or memo should be included in the test plan and test report and the responsible agency be notified if the facility no longer chooses to use the alternative. The Administrator's delegated authority (leader of the Measurement

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Technology Group) has approved these methods for the specified applications. These methods include quality control and quality assurance procedures that must be met.

- **Federal Register Notice for Broadly Applicable Alternative Test Method Approvals** – The first of these notices, published on January 30, 2007 (72 FR 4257), announced broadly applicable alternative test method approval decisions EPA made prior to 2007 to support New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP). This notice describes the alternative test method approval process and underlying regulatory requirements as well as announces the publication of the broad approvals on the EMC website and in the *Federal Register*. These broadly applicable alternative test method approvals provide options and flexibility for the regulated community to reduce the burden on source owners/operators in making site-specific alternative test method requests in addition to the permitting authorities and the EPA Administrator in processing those requests. Announcements of the broadly applicable approval decisions are published in the *Federal Register* on an annual basis.

The most recent was published on January 19, 2023 (88 FR 3408) for broad approvals made in 2022 which are as follows:

- Alt-146: Alternative to use the modified methodology in the Agency’s memorandum dated February 2, 2022 entitled Appropriate Calculation of Medium Burn Rate Category in ASTM E-2779 Testing to calculate the Medium Burn Rate Category to conduct certification testing on pellet heaters with the caveats in the Agency’s approval letter dated February 4, 2022 in place of ASTM E2779-10 for certification testing of pellet heaters subject to 40 CFR part 60, subpart AAA-Standards of Performance for New Residential Wood Heaters.
- Alt-147: Alternative to use Pro-Max, Version 5.0 or higher for modeling glycol dehydration unit emissions with the provisos specified in the Agency’s approval letter dated March 31, 2022 in place of GRI-GLYCalc software for modeling glycol dehydration unit emissions for sources subject to 40 CFR part 63, subpart HH-National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.
- Alt-148: Alternative to use Method 2B-Exhaust Volume Flow Rate in place of flow test methods specified in 40 CFR 63.565(d)(3)(iii) for *sources subject to 40 CFR part 63, subpart Y-National Emission Standards for Marine Tank Vessel Loading Operations*.

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- Alt-149: Alternative to use SW-846 Method 8270E and SW-846 Method 8015D with the provisos specified in the Agency’s approval letter dated July 27, 2022 in place of SW-846 Method 8270D and SW-846 Method 8015C for *sources subject to 40 CFR part 63, subpart HHHHHHHH- Polyvinyl Chloride and Copolymers Production: National Emission Standards for Hazardous Air Pollutants.*
- Alt-150: Alternative to use Other Test Method 51 (OTM-51) with the provisos specified in the Agency’s approval letter dated December 15, 2022 in place of surface emission monitoring (SEM) procedures required under the cited sections of the following subparts: 40 CFR 60, Subpart WWW, §§60.753(d) and 60.755(c)-(e) , 40 CFR 60, Subpart XXX, §§60.763(d) and 60.765(c)-(d), 40 CFR 60, Subpart Cf, §§60.34f(d) and 60.36f(c)-(e), 40 CFR 62, Subpart OOO, §§62.16716(d) and 62.16720, 40 CFR 63, Subpart AAAA, §§63.1958(d) and 63.1960(c)-(d) for sources subject to 40 CFR Part 60, subparts WWW, XXX, and Cf (Emission Guidelines), 40 CFR Part 62, subpart OOO (Federal Plan), and 40 CFR Part 63, subpart AAAA.
- Alt-125 and Alt-127 were withdrawn in early 2022

Contact: Lula Melton, MTG, melton.lula@epa.gov.

Method 23 Revisions – We have recently finalized extensive revisions to Method 23 for measurement of dioxins and furans. These revisions are designed to make the analytical portion of Method 23 as performance-based as possible. This will, in turn, provide additional flexibility in performing the method as well as allow for advances in technology without the need for changes to the method. Revisions to Method 23 include measurement of PCB and PAH compounds. MTG received public comments to the original revision proposal and has prepared a response to comments and changes to the proposed revisions to address public comments. Proposal was published in the Federal Register on January 14, 2020, and the associated comment period were open until March 16, 2020. We anticipate final promulgation in March of 2023. Final revisions will be posted on our website:
<https://www.epa.gov/emc/emc-recent-additions>

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Proposed Performance Specification 19 (PS-19). EPA intends to publish a new performance specification to be applied to Ethylene Oxide (EtO) Continuous Emission Monitoring Systems (CEMS) as part of future Commercial Sterilizer NESHAP technology review. PS-19 would build off our performance-based framework developed for HCl CEMS (PS-18), while laying groundwork for sub-ppmv application of CEMS. This proposal is expected to be published in the Federal Register in early spring.

Contact: Ned Shappley, MTG, shappley.ned@epa.gov and Paul Van Rooy, MTG, VanRooy.Paul@epa.gov

Proposed Method 327. EPA intends to publish a new method for determining airborne concentrations of selected speciated volatile organic hazardous air pollutants (oHAPs) in order to determine compliance with a fenceline emission standards as part of the future Hazardous Organic NESHAP (HON). The sampling and analytical approach included in this method is based on previously published EPA guidance in Compendium Method TO-15A, which describes the sampling and analytical procedures for measuring VOCs in ambient air and includes specific best practices to improve the precision and accuracy of pptv level concentrations.

Contact: Ned Shappley, MTG, shappley.ned@epa.gov and Jason DeWees, MTG, DeWees.Jason@epa.gov.

<mailto:>

Method 202 Revisions – On September 8, 2017 (82 FR 42508) EPA published proposed revisions to Method 202 with the intent to codify procedures from the Method 202 Best Practices Handbook into the revised method. EPA has chosen not to finalize these revisions at this time and instead has focused efforts on collecting additional information on train performance. EPA will re-propose Method 202 to incorporate best practices and updated information at a later date.

Contacts: Ned Shappley, MTG, shappley.ned@epa.gov, Dave Nash, MTG, nash.dave@epa.gov, and Jason DeWees, MTG, dewees.jason@epa.gov

Revisions to Methods 320 – Method 320 revisions have been completed and updates to this test method are in the queue for proposal. We will be working with a contractor to put together preamble language and propose the revised method during 2023.

Contacts: Dave Nash, MTG, nash.dave@epa.gov

Projects

Condensable Particulate Method Comparison Project – In an effort to further understand condensable particulate matter (CPM) formation, EPA has been conducting method comparison and kinetics research.

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Comparison of an impinger-based method (Method 202) and a dilution-based method (OTM-037) will inform the potential for bias due to the principle behind each method. In the past two years, testing of the Method 202 train has been conducted on a syngas bench scale setup. The OTM-37 will be run on this same setup with a similar set of matrix conditions this year. Additionally, CFD modeling has been and continues to be conducted on the OTM-37 train to guide experimental matrices. Getting back to testing on the Multi-Pollutant Control Research Facility (MPCRF) here in RTP will continue to be a goal, as will additional flow tube/mechanism work.

Contacts: David Nash, MTG, nash.dave@epa.gov, Ned Shappley, MTG, shappley.ned@epa.gov, Jason DeWees, MTG, deweese.jason@epa.gov, Ray Merrill, MTG, merrill.raymond@epa.gov, Walter Lin, MTG, lin.walter@epa.gov, Paul Van Rooy, MTG, VanRooy.Paul@epa.gov, and Peter Kariher, ORD, kariher.peter@epa.gov

Video Imaging Spectro-Radiometry (VISR) and Optical Gas Imaging (OGI) Project - EPA is seeking a cost-effective, more technologically advanced and real-time or near real-time approach to monitoring flare efficiency of NSPS or NESHAP regulated flares at industrial sites. Video Imaging Spectro-Radiometry (VISR) is a remote measurement system that can determine the combustion efficiency and heat release of a variety of flare types using optical techniques. The system has been evaluated in several blind studies for accuracy and used in multiple feasibility studies for short- and long-term use. MTG has been working to ensure the precision of the measurement is acceptable for compliance use. Initial precision test was completed in 2018 at the John Zink flare test facility. Plans are to have a report drafted to details those and subsequent findings, as well as plan for additional testing in FY '24.

Contacts: David Nash, MTG, nash.dave@epa.gov, Jason DeWees, MTG, deweese.jason@epa.gov

RICE Engine Emissions Measurement Workgroup – In an effort to determine if it is possible to establish a list of individual compounds that would represent total hydrocarbon emissions from RICE engines, a workgroup has been established. To date, there have been several stakeholder calls discussing speciating measurements, specifically Fourier Transform Infrared Spectroscopy (FTIR) and if it is possible to use these approaches to determine total hydrocarbons from these engines. At this point, EPA needs any data testers can provide to make a scientifically based/informed decision. Ideally, the data would represent engines of different sizes and ages, operating under ideal and non-ideal conditions. Until sufficient data is received, stakeholder calls will remain on hold.

Contact: David Nash, MTG, nash.dave@epa.gov

Integrated Path CEMS Project – Recently, EPA has begun working with the Electric Power Research Institute (EPRI) on how to incorporate Integrated Path CEMS (IP CEMS) into our performance specifications and QA procedures. Currently, Performance Specification 18 and Procedure 6 apply to the use of IP CEMS for HCl, but not other pollutants. As the first step of this project, we are working on an Other Test Method, or OTM, that would allow IP CEMS to be used for combustion turbines subject to 40 CFR 60, Subpart GG and KKKK and would include pollutants such as NO_x, SO₂, CO, CO₂ and

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moisture. We then hope to expand its use to other source categories and pollutants. IP CEMs technology has the potential for significant savings on O&M costs; it can measure a broad range of species; and, it may eliminate sample transport issues associated with extractive monitoring systems. One challenge remains as they are not calibrated in the traditional manner, and this is one of the major hurdles we are working to address.

Contacts: Kim Garnett, MTG, garnett.kim@epa.gov, Ray Merrill, MTG, merrill.raymond@epa.gov, and Paul Van Rooy, MTG, vanrooy.paul@epa.gov

Developing Improved Cordwood Test Methods for Wood Heaters Project – MTG is currently conducting research and development work to develop new and more representative test methods for the wood heating sector (subpart AAA and subpart QQQQ), these test methods consist of two parts: the particulate matter (PM) measurement method (based on NESCAUM’s TEOM SOP) and the fueling and operation protocol for the appliance (based on NESCAUM’s Integrated Duty Cycle (IDC) protocol methods allowed for use in EPA research). EPA’s contractor has completed the test method research work for cordwood heaters for the west coast and we are awaiting the test data from the east coast lab (supported by NESCAUM). At present, EPA’s contractor is conducting research on IDC protocol method research on hydronic heaters, and we are awaiting the complementary test data from the east coast lab (supported by NESCAUM). More data is forthcoming from precision testing other wood heating appliances including pellet heaters and forced air furnaces. The pellet heater IDC research work will be conducted by EPA’s Office of Research and Development. EPA expects that by FY24 the research and development work will be completed for all the IDC protocol methods. We expect to start proposing the respective test methods soon after the dataset is complete. Data, details and documentation can be found in the docket for this project <https://www.regulations.gov/docket/EPA-HQ-OAR-2016-0130>

Contacts: Angelina Brashear, MTG, brashear.angelina@epa.gov, Mike Toney, MTG, toney.mike@epa.gov, Steffan Johnson, MTG, johnson.steffan@epa.gov

OTMs – Other Test Methods

OTM-37: Measurement of Direct PM_{2.5} and PM₁₀ Emissions at Low Concentrations by Dilution Sampling (Constant Sampling Rate Procedure) - This method for measurement of primary PM_{2.5/10}, builds upon CTM-039’s capabilities by applying more sensitive ambient air gravimetric sampling and analysis methods to the diluted and cooled stack gas samples, achieving greater sensitivity (improved precision) than can be achieved with CTM-039 alone. Specifically, the condensable portion of Direct PM is collected on polytetrafluoroethylene (PTFE) membrane filters with a diameter of 47 mm (1.9 inches), and then analyzed according to procedures used in EPA’s Ambient PM_{2.5} Monitoring Program.

Contacts: David Nash, MTG, nash.dave@epa.gov, Ned Shappley, MTG, shappley.ned@epa.gov, Jason DeWees, MTG, deweese.jason@epa.gov

OTM-45: Measurement of Selected Per- and Polyfluorinated Alkyl Substances from Stationary Sources

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This method describes the sampling and sample recovery procedures used to measure individual semivolatile PFAS from stationary source air emissions. OTM-45 incorporates by reference some of the specifications (e.g., equipment and supplies) and procedures (e.g., sampling and sample preparation) from other methods that are essential to conducting OTM-45. Sampling in this method is modeled after Method 23/SW-846 Method 0010. Sample preparation and Laboratory analysis uses liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS) multiple reaction monitoring (MRM) as described in EPA Method 533 and Method 537.1

Contact: Ray Merrill, MTG, Merrill.Raymond@epa.gov

OTM-46: Measurement of Polychlorinated Dibenzo-p-Dioxins, Polychlorinated Dibenzofurans, Polychlorinated Biphenyls, and Polycyclic Aromatic Hydrocarbons from Stationary Sources

This method describes revisions to Method 23 for the sampling and analytical procedures used to measure selected PCDD and PCDF in stationary sources when required in an applicable subpart. This method also describes how the same sampling and analysis technology can be used to measure selected PCB and PAH from stationary source in combination or as each individual compound class when required in an applicable subpart. However, this method incorporates by reference some of the specifications (e.g., equipment and supplies) and procedures (e.g., sampling and analytical) from other methods in this part that are essential to conducting this method. Sampling is based on the promulgated Method 23 sampling methodology. Laboratory analysis includes procedures that parallel Method 1668C (found at: https://www.epa.gov/sites/production/files/2015-09/documents/method_1668c_2010.pdf) and Method 1613B of 40 CFR part 136 Appendix A and isotope dilution correction and the use of high-resolution gas chromatography/high-resolution mass spectrometry (HRGC/HRMS). Each source testing team, including the sampling and laboratory organization(s) that use this method, must demonstrate the ability to generate acceptable results that meet the performance criteria in Section 13 of this method.

OTM-48: Emission Factor Determination by the Carbon Balance Method

This method can be used to determine air emission factors for pollutants from combustion sources using the carbon balance method. Emission factors are defined as the ratio of a pollutant's mass to some quantifiable measure of the process such as mass of particulate matter per mass of fuel burned or mass of particulate matter per acre of forest burned. This method applies to all pollutants, gaseous and particulate. It is particularly applicable to open area combustion sources where the pollutant flux is difficult to measure in contrast to sampling in stacks or ducts where the gas flowrate can be measured.

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OTM-51: Unmanned Aerial System (UAS) Application of Method 21 for Surface Emission Monitoring of Landfills

This method provides procedures for use of unmanned aerial systems (UAS) to perform surface emissions monitoring for municipal solid waste landfills. This alternative test method seeks to replicate, to the greatest extent possible, EPA Method 21, but automate Surface Emission Monitoring (SEM) by utilizing a methane detection payload on an unmanned aerial system (UAS) coupled with a ground level to UAS sampling system. The methane detector payload includes a hose and custom nozzle design that, when carried by the UAS, places the nozzle inlet within 5-10 cm of the ground. The UAS transmits the geolocated methane readings to the operator via a wireless communication system. The UAS is used to sample large areas for increased meter readings.

OTM-49: Determination of Polychlorinated Dibenzo-*p*-Dioxins, Polychlorinated Dibenzofurans, Polychlorinated Biphenyls, and Polycyclic Aromatic Hydrocarbons from Stationary Sources by Gas Chromatography/Tandem Mass Spectrometry (GC-MS/MS) – in preparation.

OTM-50: Measurement of Selected Volatile Per- and Polyfluorinated Alkyl Substances from Stationary Sources - in preparation.

OTM-52: Determination of Combustion Efficiency from Enclosed Combustors Located at Oil and Gas Production Facilities – in preparation.

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Measurement Policy Group Updates:

Electronic Reporting

Implementation of Electronic Reporting – We continue to incorporate electronic reporting into subparts in 40 CFR parts 60, 62, and 63. A complete list of these rules can be found on EPA’s Compliance and Emissions Data Reporting Interface (CEDRI) website at <https://www.epa.gov/electronic-reporting-air-emissions/cedri#list>. The types of notifications and reports required to be reported electronically varies by subpart, but generally include stack test reports, CEMS performance evaluation reports, periodic reports (excess emission/deviation type reports), fence line monitoring reports, notification of compliance status reports, and flare management plans. The CEDRI website also specifies when the function to report for each report type and subpart becomes available in CEDRI, specifies the format of reporting, and contains the latest spreadsheet templates for reports that must be reported using an EPA required template. Stack test reports and CEMS performance evaluation reports that are required to be submitted electronically must be in the format generated by EPA’s Electronic Reporting Tool (ERT).

Since the beginning of 2021, EPA has finalized requirements to electronically submit stack test reports and other specified reports into rules for the following sectors:

- Municipal Solid Waste Landfills (40 CFR part 62, subpart OOO) and
- Miscellaneous Coating Manufacturing (40 CFR part 63, subpart HHHHH).

EPA has finalized reporting templates for the following periodic reports:

- Lead Acid Battery (40 CFR part 60, subpart KKa),
- Oil and Natural Gas Facilities Annual Report (40 CFR part 60, subpart OOOOa),
- Organic Liquids Distribution (40 CFR part 63, subpart EEEE),
- Auto and Light Duty Truck (40 CFR part 63, subpart IIII),
- Metal Can (40 CFR part 63, subpart KKKK),
- Miscellaneous Metal Parts and Products (40 CFR part 63, subpart MMMM),
- Plastic Parts and Products (40 CFR part 63, subpart PPPP),
- Metal Coil (40 CFR part 63, subpart SSSS),
- Miscellaneous Coating Manufacturing (40 CFR part 63, subpart HHHHH),
- Iron and Steel Foundries Area Sources (40 CFR part 63, subpart ZZZZZ), and
- Lead Acid Battery Manufacturing Area Sources (40 CFR part 63, subpart PPPPPP).

EPA has updated reporting templates for the following periodic reports:

- Stationary Compression Ignition Engines (40 CFR part 60, subpart IIII),
- Stationary Spark Ignition Engines (40 CFR part 60, subpart JJJJ),
- Portland Cement (40 CFR part 63, subpart LLL),
- Printing, Coating, and Dyeing Fabrics/Other Textiles (40 CFR part 63, subpart OOOO),
- Stationary Combustion Turbines (40 CFR part 63, subpart YYYY),
- Iron and Steel Foundries (40 CFR part 63, subpart EEEEE),
- Integrated Iron and Steel (40 CFR part 63, subpart FFFFF), and
- Site Remediation (40 CFR part 63, subpart GGGG).

Contact: Gerri Garwood, MPG, garwood.gerri@epa.gov, (919) 541-2406.



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Electronic Reporting for Utilities – Consolidation of Electronic Reporting for the Mercury and Air Toxic Standards (MATS) via the Emissions Collection and Monitoring Plan System (ECMPS), run by the EPA’s Clean Air Markets Division (CAMD) continues. A beta version, ready for independent testing in a sandbox, is expected by summer; a final version including instructions is expected by January 1, 2024. On and after that date, all electronic reporting for MATS will be submitted via the ECMPS.

Contact: Christopher Worley, EMB, worley.christopher@epa.gov, (202) 343-9531.

Data Systems

The Compliance and Emissions Data Reporting Interface (CEDRI) – CEDRI is located on EPA’s CDX. CDX is the EPA’s node on the Exchange Network, a web-based platform for data sharing between EPA and state, local, and tribal agencies. CDX is the application used by EPA programs and various stakeholders to manage environmental data transmitted to EPA in order to meet EPA’s reporting requirements. CEDRI is an application within the CDX that supports the electronic submittal of reports required by 40 CFR parts 60 (NSPS), 62 (Federal Plans), and 63 (NESHAP or MACT), *i.e.*, performance test reports (ERT file upload), performance evaluation reports (ERT file upload), notification of compliance status reports (generally PDF upload), and periodic reports (typically a spreadsheet template). CEDRI supports aggregation of multiple reports into a single package for submission. Reports submitted via CEDRI are Cross-Media Electronic Reporting Regulation (CROMERR) compliant, meaning that the electronic signature is equal to a wet ink signature. Additional information can be found on the CEDRI website at <https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>. Questions can be sent to CEDRI@epa.gov.

State, local, tribal, and EPA regional office personnel can sign up to review reports submitted to CEDRI by sending an email to CEDRI@epa.gov. The email should include the reviewer’s name, phone number, organization information (name, address, phone number), and email address.

Major enhancements to CEDRI since our last update include:

- Supports the electronic collection of Information Collection Requests - EPA issues an Information Collection Request (ICR) to gather information that will help the agency review of rules (e.g., Plywood and Composite Wood Products). The ICR seeks specific information including emission inventories, compliance demonstrations, process changes, equipment configurations and information about control technologies/practices adopted since the application of maximum achievable control technology (MACT).
- Created a Qlik report for the information collected in the Refinery Fenceline Monitoring Report
- Enhanced the email notification filters, allowing the Reviewer roles to create filters when specific reports are submitted (*i.e.*, geography, rule, date, report type, etc.)

Contact: Eric Goehl, MPG, goehl.eric@epa.gov, (919) 541-4299; or Casey Myers, MPG, myers.casey.b@epa.gov, (919) 541-0061.

The Electronic Reporting Tool (ERT) – In 2006, EPA made available a Microsoft Access® desktop application called the ERT (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>). This application creates an electronic alternative to paper reports for source emissions tests. To date, more than 13,636 reports have been submitted via CEDRI in the format generated through the use of the ERT.

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We posted Version 6 of the ERT online for use in August 2020. We continually review comments we receive on the ERT and update the ERT to address those comments. The most recent update was made February 28, 2022. Included in the update were the additions of Method 326, OTMs 45 and 46, and incorporation of additional compounds. The update also included updated SCCs, and SCCs for primary aluminum and primary magnesium chlorine bypass scrubbers, and a user manual that reflects the changes. A complete list of updates to the ERT, as well as an update history, can be found on the ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>).

To download the ERT, access the user’s manual, find answers to frequent questions, or learn about training opportunities, please visit the ERT website. If you have any questions or issues with the ERT, please contact Theresa Lowe by email or phone.

Contact: Theresa Lowe, MPG, lowe.theresa@epa.gov, (919) 541-4786.

WebFIRE – We continue to implement our multi-part process to improve the air pollutant emissions factors program and to make the program more self-sustaining. The latest version of EPA’s Recommended Procedures for Development of Emissions Factors and Use of the WebFIRE Emissions Factor Database (<https://www.epa.gov/air-emissions-factors-and-quantification/procedures-development-emissions-factors-stationary-sources>) was posted January 2023. In addition to this, several improvements have been made to the system including an extensive cleanup of our emissions factors in WebFIRE (removal of duplicates), improved search functionality with a bulk download feature, and the addition of a user defined emission factor functionality that allows users to create their own factors.

Contact: Michael Ciolek, MPG, ciolek.michael@epa.gov, (919) 541-4921; Casey Myers, MPG, myers.casey.b@epa.gov, (919) 541-0061.

Emissions Factors Update

- Revisions to AP-42 Section 11.6 – Portland Cement Manufacturing were finalized on March 22, 2022. Information on the update is available on the EPA’s website (<https://www.epa.gov/air-emissions-factors-and-quantification/final-revisions-ap-42-chapter-11-section-6-portland-cement>). The revisions include a new emission factor for NO_x (SCC: 30500623) and minor updates to some of the tables and added links to the available references.
- Revisions to AP-42 Section 1.6 – Wood Residue Combustion in Boilers were finalized on March 22, 2022. Information on the update is available on the EPA’s website (<https://www.epa.gov/air-emissions-factors-and-quantification/final-revisions-ap-42-chapter-1-section-6-wood-residue>). The revisions include two new emission factors for PM-Fil (SCC: 10200902) and CO (SCC: 10200902). Made minor updates to some of the tables and added links to the available references.
 - Draft revisions to AP-42 Section 2.2 – Sewage Sludge Incineration were drafted on January 9, 2023. Information on the draft revisions is available on the EPA’s website (<https://www.epa.gov/air-emissions-factors-and-quantification/draft-revisions-ap-42-chapter-2-section-2-sewage-sludge>). The draft revisions include several new/revised emission factors and minor updates to the entire AP-42 section.

Contact: chief_info@epa.gov; Casey Myers, MPG, myers.casey.b@epa.gov, (919) 541-0061.

Improving Emissions Monitoring through Rulemaking

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Information Collection Requests (ICRs) – ICRs are a means by which we use our authority under section 114 of the Clean Air Act to collect source emissions and operational data in order to assist rule development. These requests generally require the use of the ERT to submit data from source testing. In support of rule writers and their ICRs, MPG and MTG staff may maintain websites for responses to FAQ, hold webinars, expedite alternative testing requests, and respond to questions. In the past two years, we issued ICRs for the following sectors: Taconite Iron Ore Processing, Integrated Iron and Steel, Plywood, Primary Magnesium, Turbines, Coke Ovens, and Chemical Manufacturing. In the future, we plan to collect all testing information from ICRs using CEDRI.

Contact: Kevin McGinn, MPG, mcginn.kevin@epa.gov, (919) 541-3796; Theresa Lowe, MPG, lowe.theresa@epa.gov, (919) 541-4786; Gerri Garwood, MPG, garwood.gerri@epa.gov; Owen Daly, MPG, daly.owen@epa.gov; or Robert Bivens, MPG, bivens.robert@epa.gov, (919) 541-5760.

Rule Reviews/Lean Decision – The EPA continues to perform Risk and Technology Reviews for previously promulgated rules as mandated by the Clean Air Act. Many of these reviews are the results of lawsuits and subsequent court-ordered deadlines. Additionally, the EPA is performing “gap filling” due to the result of a lawsuit by the Louisiana Environmental Action Network, known as the “LEAN decision”. The decision held that EPA must incorporate HAPs into rules for source categories where those HAPs are present but were not regulated in previous versions of their corresponding NESHAPs. The rules in which we have/will be performing gap filling include six mandated by the court:

- Miscellaneous Coating Manufacturing (40 CFR part 63, subpart HHHHH)
- Lime Manufacturing (40 CFR part 63, subpart AAAAA)
- Plywood and Composite Wood Products (40 CFR part 63, subpart DDDD)
- Integrated Iron and Steel (40 CFR part 63, subpart FFFFF)
- Taconite Ore (upcoming proposal: 40 CFR part 63, subpart RRRRR)
- Rubber Tire (upcoming proposal: 40 CFR part 63, subpart XXXX)

In addition to these six rules, we are also evaluating whether any gaps exist in every other part 63 rule in which we are performing a Risk and Technology Review.

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1-BP – For the first time in the over 30-year history of the NESHAPs, a new HAP, 1-Bromopropane (1-BP) was added to the 112(b) list of HAPs. The listing of 1-BP, completed in February of 2022, was performed as the result of a successful petition to list the compound, filed in 2015. This compound is used as a solvent and a reactant in chemical manufacturing processes. Some of the specific uses include vapor degreasing, spot cleaners, stain removers, adhesives, sealants, and automobile care products. As new rules are promulgated and existing rules are reviewed, the EPA will be evaluating whether 1-BP should be included as a regulated pollutant in those rules.

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Innovative Monitoring – We continue our implementation of new monitoring technologies in current rulemaking activities. In November 2021, we proposed 40 CFR part 60 Appendix K, Determination of Volatile Organic Compound and Greenhouse Gas Leaks Using Optical Gas Imaging. This protocol describes how optical gas imaging surveys should be performed and the training requirements for camera



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operators. We bolstered this proposal with a supplemental proposal in November 2022 and plan to finalize Appendix K by the end of 2023 as part of the Oil and Natural Gas Climate Review final rule. We also proposed to require the use of Appendix K with OGI surveys in the Gasoline Distribution sector rulemaking in June 2022.

In addition to Appendix K, as part of the proposed rulemaking for the Oil and Natural Gas Climate Review, we also proposed two pathways to incorporate new monitoring technology into the rulemaking. In the proposed periodic screening approach, an owner or operator would be required to survey at a set frequency based on the detection threshold of the technology being used. In the proposed continuous monitoring approach, the owner or operator would be required to continuously monitor emissions at the site and find ways to lower the emissions if either a short-term or long-term emission threshold is triggered. In both pathways, the technology would be approved by EPA prior to use; once EPA reviews the technology, a finding will be made as to whether the approval is site-specific or can be extended more broadly. EPA plans to finalize the Oil and Natural Gas Climate Review by the end of 2023.

Finally, in January 2023, EPA finalized the first alternative means of emission limitation (AMEL) for a leak detection program for two process units at a refinery in Corpus Christi, Texas. The AMEL replaces the manual component-by-component periodic Method 21 monitoring requirements with a continuously operating leak detection sensor network. The AMEL also includes a requirement for annual Method 21 screenings for at least two years to provide assurance that the sensor network performs as expected. Continuous monitoring has the potential to detect leaks, especially large ones, much faster than the current practice of monitoring periodically using Method 21, leading to less pollution and cleaner air near these sites.

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