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Emissions Factors and Policy Applications Center
Highlights for 2005
Environmental Protection Agency

Office of Air Quality Planning and Standards
Sector Policies and Programs Division
(www.epa.gov/ttn/chief/efpac)

Below are highlight items and other **Emissions Factors and Policy Applications Center (EFPAC)** activities involving emission monitoring and other quantification protocols occurring during the past twelve months.

- **Electronic Reporting Tool (ERT)** - a Microsoft Access desktop application that is an electronic alternative for paper reports documenting EPA's emissions measurement Methods 1 through 5 and Method 202 for stationary sources. The ERT replaces the time-intensive manual preparation and transcription of stationary source emissions test plans and reports currently performed by contractors for emissions sources and the time-intensive manual quality assurance evaluations and documentation performed by State agencies. The ERT provides a format that 1) highlights the need to document the key information and procedures required by the existing EPA Federal Test Methods; 2) facilitates coordination among the source, the test contractor, and the regulatory agency in planning and preparing for the emissions test; 3) provides for consistent criteria to quantitatively characterize the quality of the data collected during the emissions test; 4) standardizes the reports; and 5) provides for future capabilities to electronically exchange information in the reports with facility, State or Federal data systems. In addition to improving the content and quality of source emissions test reports, the ERT should reduce the workload associated with manual transcription of information and data contained in the report, the resources required to store and access the reports; and redundant efforts in using the data for multiple purposes. Future versions of the ERT will provide for electronic preparation and data transfer from other EPA and State test methods. The current version of the ERT is available for review and comment at http://www.epa.gov/ttn/chief/ert/ert_tool.html. Contact: Ron Myers at myers.ron@epa.gov or (919) 541-5407.
- **WEB-FIRE** - The Internet version of the emissions Factor Information Retrieval System (FIRE) is now available for review and comment at <http://www.epa.gov/ttn/chief/efpac/index.html>. The FIRE application web site provides fast and user-friendly access to the Agency's air emissions factors information. In time FIRE will replace the software application, FIRE version 6.25, and the Microsoft Access version of the database. An Internet version of FIRE will allow more frequent updates and easier access. The Internet site includes a list of frequently asked questions and describes in more detail the functions of the FIRE program and how the emissions factors are derived. The WEB-FIRE also includes more thorough and directed guidance on the uncertainties associated with applying emissions factors and the alternatives to emissions factors, specifically direct emissions measurements and monitoring. Contact Michael Ciolek, ciolek.michael@epa.gov, 919-541-4921
- **Revisions to Part 64, Compliance Assurance Monitoring**, - We have drafted rulemaking entitled "Proposal of Revisions to Part 64 - Compliance Assurance Monitoring Rule," which revises Part 64 that would govern how states implement monitoring in the title V operating permit program. The revised rules would affect nearly every pollutant-specific emissions unit at title V

sources. The rule would define more specifically when monitoring may be needed on a pollutant-specific emissions unit basis and set forth a process by which sources and permitting authorities would assess existing monitoring and create periodic monitoring, as needed, to provide a reasonable assurance of compliance with applicable requirements. This proposal is part of the Agency's four-step approach to addressing monitoring in title V permits as explained in final rule addressing §§ 70.6(c)(1) and 71.6(c)(1) of 40 CFR parts 70 and 71 (referred to as the Umbrella Monitoring Rules in the January 22, 2004 Federal Register notice (69 FR 3202). Contact: Peter Westlin, westlin.peter@epa.gov, 919-541-1058

- **Monitoring Knowledge Base** - EPA's Monitoring Knowledge Base web-site provides a user-friendly compilation of information about air pollution control technologies and the monitoring techniques applicable for establishing the ongoing compliance operations of a range of air pollution control measures. The MKB presents the monitoring information is by industry type and by control technique. The initial version of the MKB focuses on the printing and publishing industry and addresses the technologies and monitoring of activated carbon adsorbers, capture systems, catalytic oxidizers, compliant inks and coatings, condensers, cyclones, electrified filter beds, electrostatic precipitators, fabric filters, thermal oxidizers, and wet scrubbers of r particulate and gaseous control. Contact: Barrett Parker, parker.barrett@epa.gov, 919-541-5635
- **TANKS** - TANKS is a Windows-based computer software program collaborative effort with API that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from fixed- and floating-roof storage tanks. We have made available an updated version of TANKS (Version 4.09d) at <http://www.epa.gov/ttn/chief/software/tanks/index.html>. The program is now compatible with all versions of MS Access. The program installation has been streamlined and the program files are smaller. TANKS displays and prints reports with an Internet browser. The report formats have not changed. Improvements include 1) updating the chemical data with missing CAS numbers; 2) addition of new compounds; 3) correcting Antoine's coefficients for several compounds; 4) addition of a new partial speciation profile for gasoline oxygenated with ethanol; and correcting meteorological data. TANKS is based on the emission estimation procedures from [Chapter 7](#) of EPA's [Compilation Of Air Pollutant Emission Factors \(AP-42\)](#). In the future, EPA does not expect to provide updated versions of TANKS beyond Version 4.09d nor support the current version of TANKS in the future once it becomes outdated. Therefore, EPA anticipates that the private sector may want to develop new/improved software versions for use by anyone currently using the TANKS program. Our group intends to develop and implement an EPA approval protocol/process for endorsing new EFs including any software developed proposed to estimate the organic vapor emissions from storage tanks from outside entities. We have not developed specific assessment protocols for software such as TANKS but envision that verifying the protocols will entail simulations testing and results verification, at a minimum. We fully expect that in providing EPA-approval to such third-party developed products, we will alleviate acceptance issues that state/local/federal entities might have with vendor-developed EFs and other tools. Contact: Michael Ciolek, ciolek.michael@epa.gov, 919-541-4921
- **Inadequate Monitoring (advanced notice of proposed rulemaking)** - On February 16, 2005 (Volume 70, Number 31)], we published and ANPR asking for public comment to help us identify monitoring in applicable requirements under the Clean Air Act (Act) that is potentially inadequate with respect to the statutory monitoring requirements for operating permits issued under title V of the Act. The ANPR also requested public comment on ways to improve such monitoring. The goal is to provide for improvements to existing inadequate monitoring through rulemakings to revise the applicable requirements themselves or through other programmatic

approaches will be more effective, more equitable, and more efficient, where necessary, than by addressing inadequate monitoring on a case-by-case basis in the issuance and renewal of title V operating permits. To inform EPA's consideration of improvements to existing monitoring, today's ANPR seeks stakeholder input to identify inadequate monitoring in certain Federal standards and State implementation plan (SIP) rules and to suggest specific ways to improve such monitoring. We are reviewing and preparing responses to comments received in response to the ANPR. Contact: Barrett Parker, parker.barrett@epa.gov, 919-541-5635

- **Emissions Factors and Emissions Measurement Uncertainty Assessment** - We are investigating ways to assess and reduce the uncertainty associated with using emissions factors, such as those contained in AP-42 particularly those that are based on emissions testing data. We have applied statistical processes to assess the uncertainty associated with emissions factors for several well documented chapters of AP-42. The results from the statistical analysis indicate the potential for uncertainty bounds of several orders of magnitude for the 75th percentile and the 90th percentile adjustments on emissions factors for gaseous criteria pollutants, hazardous air pollutants (HAP), and particulate matter (PM). We have begun to develop possible approaches emissions factors can be adjusted based on sample size, pollutant, and presence/absence of add-on control devices. Contact: Barrett Parker, parker.barrett@epa.gov, 919-541-5635
- **Open Path Fugitive Leak Detection** – We have been working with various groups within OAQPS and externally to conduct assessments of emissions from gasoline dispensing facilities (GDF). EPA plans to develop rules, policy and guidance to assist with the reduction of contamination from underground storage tanks and to reduce vapor leaks from vent pipes and gasoline pump refilling activities. We developed two documents that will assist in developing policy and guidance; the first is an options paper that will establish a schedule for removing Stage II vapor recovery systems (VRS) from GDFs and the second is guidance for automobile manufacturers who are interested in obtaining waivers to remove Stage II VRS. We conducted testing at GDF using open path monitoring equipment and will provide a summary report of the monitoring protocol and its efficacy. Stage II Vapor Recovery Systems – Options Paper, Guidance for Waiving Stage II Vapor Recovery Systems for Automobile Manufacturers, Conduct Stage II Monitoring & Prepare Final Report, Guidance Document for Reducing VOC and HAP Emissions from Gas Stations on Tribal Lands, Develop open path monitoring protocol for gas stations Contact: Annabelle Allison, allison.annabelle@epa.gov, 919-541-0708. For Stage I Monitoring to Support Area Source Rule, contact Steve Shedd, shedd.steve@epa.gov, 919-541-5397
- **Interpretive Rule for Parts 70/71 Monitoring** - We are preparing to publish “Interpretive Rulemaking to Clarify the Scope of Certain Monitoring Requirements for State and Federal Operating Permits Programs.” This action will request comments on a proposed interpretation of certain existing regulatory language relative to the need to address the sufficiency of existing monitoring requirements included in State and federal operating permits programs developed under title V of the Clean Air Act (Act). Specifically, our proposed interpretation is that §§ 70.6(c)(1) and 71.6(c)(1) of 40 CFR parts 70 and 71 (previously referred to as the Umbrella Monitoring Rule) do not provide a basis for assessing the adequacy of or adding monitoring requirements to operating permits, independent of such monitoring required under existing federal air pollution control rules and State implementation plan (SIP) rules (i.e., monitoring required under applicable requirements), including monitoring required under part 64 (the compliance assurance monitoring, or CAM, rule) where it applies, and such monitoring as may be required to fill gaps under the separate periodic monitoring requirements of the operating permits rules. We will also formally withdraw a September 17, 2002 proposal to revise these paragraphs

in parts 70 and 71. Contact: Peter Westlin, westlin.peter@epa.gov, 919-541-1058

- **Draft Performance Specifications and QA/QC for Continuous Parameter Monitoring Systems (PS-17)** - Our newer emissions standards (e.g., MACT and NSPS) frequently include requirements for monitoring of process or control device operational parameters and for having the operator to stay within site-specific or rule-specific operating ranges. We recognized the need for performance specifications for installing, operating and maintaining these parametric monitoring systems (e.g. temperature, pressure, pH, liquid flow, conductivity) and have begun work on drafting performance specifications and quality assurance requirements. We expect to have documents ready for proposal and public review in early 2006. Contact: Barrett Parker parker.barrett@epa.gov, 919-541-5635
- **Continuous Monitoring of Primary PM_{2.5}** - We have underway a project to review the technologies available for monitoring continuously primary particulate matter from stationary sources including both filterable and condensable materials. Included in the review are continuous dilution sample collection systems used in combination with continuous mass measurements. We expect a report on the study with recommendations for future work in early 2006. Contact: Ron Myers, myers.ron@epa.gov, 919-541-5407
- **Implementing Testing Methods Appropriate for Measuring PM_{2.5}** - On Tuesday, November 1, 2005 (Vol. 70, No. 210), we published the Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards. In that rulemaking, we discuss the applicability of emissions testing methods to demonstrating compliance with local control measures for primary particulate matter in nonattainment areas and the need to revise which stationary source test methods would apply. Information available indicates that the majority of existing SIPs specify the use of stationary source test methods that quantify only filterable particulate matter. In implementing the NAAQS, we recommended that the use of EPA Method 202 (with appropriate options) combined with EPA Method 5 or EPA Method 17 or Method 201 or 201A provides a reasonable indication of total particulate matter emissions for the majority of stationary emission sources. We also noted the availability and applicability of Conditional Test Method 039 - Measurement of PM 2.5 and PM 10 Emissions by Dilution Sampling (Constant Sampling Rate Procedures). We intend to develop detailed guidance on the selection and application of methods appropriate for implementing the NAAQS once we review the comments and develop the final rule. Contacts: Ron Myers and Barrett Parker, myers.ron@epa.gov, parker.barrett@epa.gov, 919-541-5407 or 5635