

Improving EPA's Emissions Factors Program

Emissions Inventory
Conference

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Topics

- Background
- Emissions Factor Program Improvement ANPRM
 - WebFIRE
 - Emissions Factors Procedures Document
 - Electronic Reporting Tool
 - Requiring Electronic Submission of Performance Tests
 - Source Classification Codes
- ANPRM Comments
- Next Steps

Background

- The Emissions Factors Program is 40+ years old and contains > 22,000 factors (82% C rated or worse), but stakeholders have indicated they still want and need emissions factors!

Background (continued)

- Program assessments and NAS and OIG comments indicated that:
 - EPA needs to retain the factors program
 - Factors take too long to develop
 - EPA stopped developing most factors
 - S/L APCAs are worried about the quality of factors developed by industry
 - Factors are being used for many air control activities beyond emissions inventories
 - Uncertainty of factors needs to be addressed
 - No emissions factors for key emission points

Emissions Factors Program Improvement Project

- We are working on projects to improve the emissions factors program and have published (October 14, 2009) an ANPRM to seek comments on several key approaches:
 - WebFIRE – we’re transitioning from AP-42 and FIRE to a more transparent and user-friendly WebFIRE system
 - Electronic Reporting Tool (ERT) – we’re making it easier for performance test data to be submitted electronically
 - Emissions Factors Procedures Document – we’re updating this document to reflect changes with the new tools and data submittal requirements
 - Requiring Submission of Performance Test Data – we’re contemplating requiring electronic submittal of all federally-required performance tests to provide adequate data for emissions factors development

WebFIRE

- ❑ Will combine AP-42 and FIRE, but is much more!
- ❑ Will become the online repository for most OAPQS emissions factors and data
- ❑ Will be an emission factor development tool for EPA and other stakeholders
- ❑ Will allow users to examine the background information supporting each EPA emissions factor
- ❑ Will provide a convenient forum for public participation and data review by making all data available online
- ❑ Will provide performance test data for other uses such as rulemakings or risk analyses
- ❑ Will provide other useful info such as standard deviation and data ranges

Emissions Factors Procedures Document

- ❑ Will explain the revisions to the EF rating system
- ❑ Will provide guidelines on independent third party review to improve the quality rating of the data
- ❑ Will explain use of data points measured below “minimum detection limits” or non detects in emissions factors development
- ❑ Will establish guidelines for identifying outliers and how they are used (or not used) for emissions factors development

Emissions Factors Procedures

Document (continued)

- Will explain how we may (or may not) use performance test data to update emissions factors using a pooled variance approach
- Will describe how EFs are developed from disparate data sets; i.e., 4 tests from 1986 and 3 tests from 2009
- Will describe the frequency for EPA evaluation of available test data contained in WebFIRE for a source category to determine whether:
 - Existing EPA emissions factors should be revised
 - New EPA emissions factors should be developed (processes or emissions points have significantly changed)

Electronic Reporting Tool

- Provides mechanisms for:
 - preparing a test plan
 - collecting and compiling emissions measurement data
 - calculating mass emission rates
 - documenting quality assurance of testing and of the appropriate use of test methods
 - documenting fully all test conditions and results

Electronic Reporting Tool

(continued)

- ❑ Calculates a test report quality rating that provides an appraisal of the reliability of the emissions data relative to its use in EF development
- ❑ Contains a spreadsheet application for submitting data electronically for previously conducted source tests
- ❑ Produces electronic output for submitting test data through EPA's Central Data Exchange (CDX) – then onto WebFIRE
- ❑ Required for use in several recent ICRs and is proposed in several rules

Electronic Reporting Tool (continued)

- ❑ Some issues with the ERT were noted in the ICRs:
 - No “template” for basic source info
 - No printable test report
 - Omission of HF and HB for Method 26A
 - Test report showed the wrong SCC
 - Could not add more than 10 test runs
 - Could not change run dates
- ❑ We have fixed all these issues and many more
- ❑ We are adding more methods and other amenities, such as templates for importing field and lab data in electronic format directly to the ERT

Requiring Submittal of Performance Test Data to EPA

- Many of the quality issues with the emissions factors program are caused by lack of data
- Many performance tests are conducted annually, but the reports and data are in State and Local APCAs' filing cabinets
 - It's too time-consuming to copy, compile, and ship them to EPA
- Considering rulemaking to require sources to submit performance tests and corresponding data directly to EPA

Requiring Submittal of Performance Test Data to EPA (continued)

- Our initial thoughts would probably be to require electronic submission of mandated performance tests data by revising reporting provisions in the parts 60, 61, and 63 general provisions
- **We are not adding any new performance testing requirements**
- We expect up to ~4,000 submittals per year
- We are also considering requiring the electronic submission of other compliance data, such as excess emissions and/or compliance status reports

Source Classification Codes

- Is the Source Classification Code system working?
 - State APCAs have pointed out many duplicates
 - We have found many duplicates and triplicates as well
 - Do we need additional SCCs?
 - Should we phase out “other” or “miscellaneous” emissions factors categories?
 - If we eliminate SCCs, then would having a crosswalk pointing to old SCCs be needed?
- How would revamping the system affect your emissions inventory efforts?

Emissions Factors Program

Improvement ANPRM Comments

- 53 sets of comments were received
 - 2 duplicate set of comments and 5 unrelated to the ANPRM
- Commenters:
 - State and Local APCAs
 - Industry
 - Trade Associations including the FPA
 - Law Firms
 - Environmental Contractors
 - Private Citizen
 - Environmental Action Groups
 - Anonymous

ANPRM Comments

- ❑ Impractical or not economical to test small sources, so EFs should be used
- ❑ EPA must allow the use of EFs from suppliers
- ❑ Some opposed submitting performance test reports to EPA electronically
- ❑ EPA should focus on EF development for smaller sources like “heaters, storage tanks, emergency generators, etc.”

ANPRM Comments (continued)

- ❑ Some opposed requiring third party evaluation for performance tests used for EF development
- ❑ If requiring submission of performance test reports, then evaluate the various State and Local APCA reporting systems to eliminate redundancy and potential duplicative costs

ANPRM Comments (continued)

- Frequency for updating EFs
 - Update highly rated EFs every 10 years or less
 - Adjustment or transitional period needed

Other ANPRM Issues

- ❑ Use of EFs for purposes other than emissions inventory gap filling
- ❑ Third party reviews of test reports
- ❑ How should we treat performance tests for similar sources that use “similar”, but not the same, test methods (i.e., CARB or TCEQ and EPA-approved methods)?
- ❑ Should we eliminate EFs with no supporting data?

Our Next Steps

- ❑ Draft Emissions Factors Development Guidance Manual should be out in late this year for public review
- ❑ Improved WebFIRE should be operational by late 2011
- ❑ ERT is out there and being used now
 - We plan on more updates and are adding more methods periodically
- ❑ Decision forthcoming on requiring submission of performance tests
- ❑ Summer 2011 for a draft Source Classification Code program guidance document