

Electronic Reporting/Emissions Factors Development

OAQPS - MEASUREMENT POLICY GROUP

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NEI Workshop Emissions Factors
Training
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Topics for Discussion

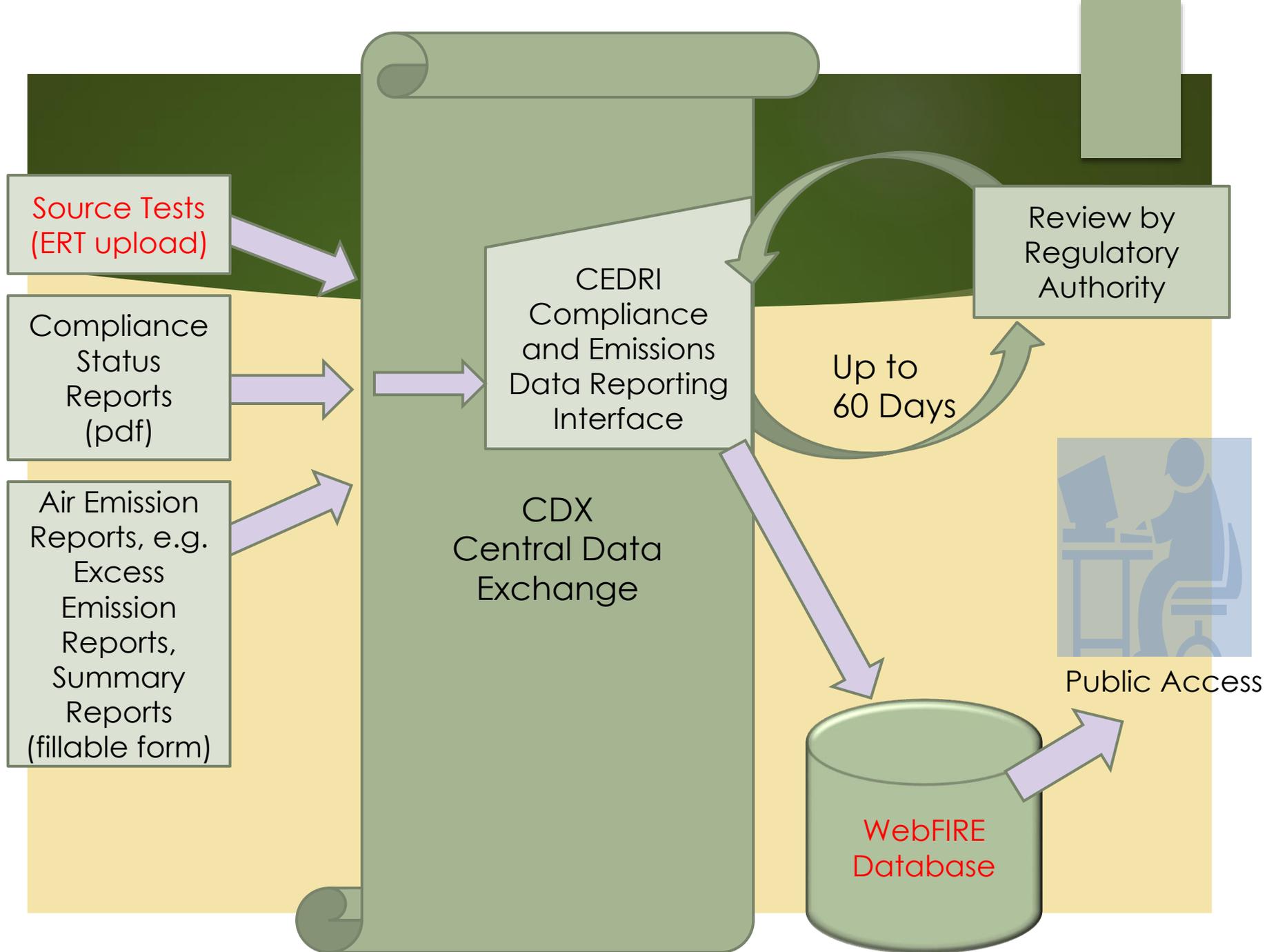
- ▶ Overview of the Process
- ▶ Benefits of E-Reporting
- ▶ Rule Development
- ▶ The ERT
- ▶ CEDRI
- ▶ WebFIRE

CEDRI ERT

AUGGHHH!

What does it all mean?

CDX webFIRE



Source Tests
(ERT upload)

Compliance
Status
Reports
(pdf)

Air Emission
Reports, e.g.
Excess
Emission
Reports,
Summary
Reports
(fillable form)

CEDRI
Compliance
and Emissions
Data Reporting
Interface

CDX
Central Data
Exchange

Up to
60 Days

Review by
Regulatory
Authority



Public Access

WebFIRE
Database

Why does EPA want this data?

- ▶ Emission factors revisions
- ▶ Emission inventory improvement
- ▶ Risk and technology review
- ▶ Data sharing/Data Backup
- ▶ Detection limit review

Other Benefits

- ▶ Some data will be stored in the system and not need to be entered more than once
- ▶ Report standardization
 - ▶ Quicker reviews
 - ▶ Required elements outlined
 - ▶ Imbedded QA checks
- ▶ Accessibility
- ▶ Federal repository
 - ▶ Includes data back-up
 - ▶ Reduces hardcopy storage needs



Where are we now?

- ▶ ERT 35 Methods (in addition to Methods 1-4) <http://www.epa.gov/ttnchie1/ert/>
 - ▶ 3 Performance Specifications
- ▶ CEDRI available for report submission <http://www.epa.gov/ttn/chief/cedri/index.html>
 - ▶ ~25 sectors require ERT submissions
 - ▶ Some sectors require other reports
- ▶ >2700 submissions
 - ▶ Includes 550+performance test reports
- ▶ Reports searchable in WebFIRE - <http://cfpub.epa.gov/webfire/index.cfm?action=fire.searchERTSubmission>
- ▶ New Emissions Factor Procedures - <http://www.epa.gov/ttn/chief/efpac/procedures/index.html>
- ▶ Email notification for submissions - <http://cfpub.epa.gov/webfire/index.cfm?action=fire.userregister>

Where are we heading?

- ▶ Proposed E-Reporting Rule for Part 60-signed 2/20/15 – Appeared in FR 3/27/15
- ▶ Develop E-Reporting Rule for Part 63
- ▶ ERT Improvements
- ▶ Further develop CEDRI reporting forms
- ▶ Develop schema for ERT and subpart specific reports
- ▶ Emission factor automation
- ▶ Enhance links to other EPA data systems

Rule Development

The Electronic Reporting and Recordkeeping Requirements for NSPS Rule

- ▶ Has undergone yet another name change
- ▶ Scope limited to Part 60
- ▶ General Provisions and approximately 75 subparts
- ▶ Signature 2/20/15 – FR 3/27/15
- ▶ Have started working on Part 63



What's in the rule?

- ▶ Covers the following reports
 - ▶ Stack tests and CEMS Performance Evaluations
 - ▶ Summary Reports and Excess Emission Reports (fillable forms)
 - ▶ Notification of Compliance Reports (pdf upload)
 - ▶ Subpart Specific Reports
- ▶ Report through CEDRI
- ▶ **Must also report to the S/L/T office...unless the S/L/T accepts the electronic submission**
- ▶ Do not have to report to EPA regional office
- ▶ Includes e-records in lieu of paper records

The ERT

ERT – Electronic Reporting Tool

- ▶ MS Access based
- ▶ Download:
<http://www.epa.gov/ttn/chief/ert/index.html>
- ▶ New Version 5 rolled out December, 2014
- ▶ Now accepts EPA Method 30B
- ▶ http://www.epa.gov/ttn/chief/ert/ert_info.html

Quality Assessment Questions

Completeness Regulatory Review

Update Completeness Answers



Note: ERT will answer the salmon colored Completeness questions with a "Yes" or "No" based on the response is provided in the applicable area or a file is attached in the applicable line. Clicking in the "Click to Show ERT Data" column will show the applicable area or attachment. Selecting the "Update Completeness Answers" button will refresh the answers based on any new content entered into ERT. The Completeness answers can only be changed by entering data into the applicable areas or adding attachments. Only the Source or Testing Company can add or edit data in the Project Data Set.

Question	Answer	Comment	Click to Show ERT Data
As described in ASTM D7036-12 Standard Practice for Competence of Air Emission Testing Bodies, does the testing firm meet the criteria as an AETB or is the person in charge of the field team a QI for the type of testing conducted? A certificate from an independent organization (e.g., Stack Testing Accreditation council (STAC), California Air Resources Board (CARB), National Environmental Laboratory Accreditation Program (NELAP) or self	No		Review certificate
Is a description and drawing of test location provided?	Yes		(Test Plan Item 1 and/or Attachment) - Review dimensions and diagram.
Has a description of deviations from published test methods been provided, or is there a statement that deviations were not required to obtain data representative of typical facility operation?	Yes		(Test Plan Item 8 and Attachment) - Review test method documentation.
Is a full description of the process and the unit being tested (including installed controls) provided?	Yes		(Test Plan Item 7a & 7b & Attachment) - Review process documentation.
Has a detailed discussion of source operating conditions, air pollution control device operations and the representativeness of measurements made during the test been provided?	Yes		Review the source/testers Test Data Quality Assessment.
Were the operating parameters for the tested process unit and associated controls described and reported?	Yes		Review Process Run Data.
Is there an assessment of the validity, representativeness, achievement of DQO's and usability of the data?	Yes		Review the Tester's DQ assessment
Have field notes addressing issues that may influence data quality been provided?	No		Review Field Notes.
Have the following been included in the report: Dry Gas Meter (DGM) calibrations, pitot tube and nozzle inspections?	Yes		Review calibration documentation.

Quality Assessment Questions

Open Expanded

Completeness **Regulatory Review**

Reviewer's Name: Review Date:

Regulatory Agency:

Reviewer's Email:

Reviewer's Phone:

Note: The answers and comments associated with the Completeness Questions (salmon shaded cells) are determined by the presence of documentation provided in the test report. Responses made by the applicable regulatory reviewer (rows with no shading of the Question field) will have precedence over automated responses made by the ERT in the Completeness assessment. Comments should be provided to substantiate any determination of sufficiency for the individual questions. The regulatory reviewer may not modify data in the Project Data Set, only answer the questions and provide comments.

Include Completeness Questions 

Question	Answer	Comment	Click to Show ERT Data
As described in ASTM D7036-12 Standard Practice for Competence of Air Emission Testing Bodies, does the testing firm meet the criteria as an AETB or is the person in charge of the field team a QI for the type of testing conducted? A certificate from an independent organization (e.g., STAC, CARB, NELAP) or self declaration provides documentation of competence as an AETB.			Review certificate
Was a representative of the regulatory agency on site during the test?			Review Regulatory Observer Comments.
Is a description and drawing of test location provided?			(Test Plan Item 1 and/or Attachment) - Review dimensions and diagram.
Is there documentation that the source or the test company sought and obtained approval for deviations from the published test method prior to conducting the test or that the tester's assertion that deviations were not required to obtain data representative of operations that are typical for the facility?			(Test Plan Item 8 and Attachment) - Review test method documentation.
Were all test method deviations acceptable?			(Test Plan Item 8 and Attachment) - Assess deviations and approval documents.
Is a full description of the process and the unit being tested (including installed controls) provided?			(Test Plan Item 7a & 7b & Attachment) - Review process documentation.
Has a detailed discussion of source operating conditions, air pollution control device operations and the representativeness of measurements made during the test been provided?			Review description of source operation, APCD operation and sampling for representativeness. (Process Run Data, APCD Run Data, Lab
Is there documentation that the required process monitors have been calibrated and that the calibration is acceptable?			Review process monitor calibration data & Tester DO

ERT – Future Features

- ▶ Functionality to record/assess cyclonic flow
- ▶ Method 2G and 2F
- ▶ Handle process based RATA results
- ▶ Add TEQ multipliers to M23
- ▶ Add multi-stack capability

CEDRI

CEDRI

- ▶ Supports “roles” for users –
 - ▶ Preparer: Prepares reports for a certifier to sign and submit
 - ▶ Certifier: Prepares, edits, and reviews information as well as signs and submits information to the EPA
 - ▶ Preparers and Certifiers must be registered for the same organization in order to share reports
- ▶ Link with Facility Registry System (FRS)
 - ▶ Pre-populate already reported data to EPA and to update information
 - ▶ Can generate a new FRS ID if needed

CEDRI (cont.)

- ▶ Allows users to manage their facility profile under each organization for which they are registered
 - ▶ Contractors can be registered for multiple organizations for each one of their clients using the same login credentials.
 - ▶ No risk of seeing other client information when the organization approach is used
- ▶ Allows facilities to create templates for reporting
 - ▶ Streamlines process of submitting reports
 - ▶ Users can submit one report package
- ▶ Help Desk: 888-890-1995 or (970)494-5500 for Email: helpdesk@epacdx.net

CEDRI Future Enhancements

- ▶ Bulk XML upload of data
 - ▶ Users can submit data using a bulk XML data upload
 - ▶ Would include the semi-annual compliance report and CEMS/CPMS data for the MATS rule
- ▶ Dynamic report creation Streamlined system for creating PDF report of information
- ▶ Responsive design (mobile device access)

CEDRI Future Enhancements (cont.)

- ▶ Send an email to cedri@epa.gov for state reviewer access
- ▶ Enhanced State reviewer tool February 2015
 - ▶ Will included notification customization based on location and type of source.
- ▶ Link with the Emissions Inventory System Summer 2015
 - ▶ Goal is to pre-populate already reported data to EPA and to update information

WebFIRE

WebFIRE

- ▶ WebFIRE's Functions
- ▶ Recommended Procedures for Development of Emissions Factors and Use of the WebFIRE Database -
<http://www.epa.gov/ttn/chief/efpac/procedures/index.html>
- ▶ Overview of deriving EPA emissions factors
- ▶ Public participation/review of emissions factors

WebFIRE Functions

- ▶ WebFIRE is EPA's online emissions factor retrieval, repository, and development tool.
- ▶ Repository for electronically submitted performance test reports, RATA reports, NOCS, compliance reports (summary/excess emissions)
- ▶ Provides search functions for reports received via CEDRI
- ▶ Register for email notifications when reports are received in WebFIRE

- Applications Center
- Basic Information
- Emissions Factors / AP42
- Emissions Factors & Estimation Tools
- CHIEF Archives

WebFIRE Report Search and Retrieval

WebFIRE contains the following types of reports submitted by facilities to the EPA:

- Performance Test Reports
- Performance Evaluations: Relative Accuracy Test Audits (RATAs)
- Notification of Compliance Status Reports
- Air Emissions Reports, such as Summary Reports and Excess Emission Reports

WebFIRE allows you to search for report submissions and download the files of interest. To retrieve reports, enter your search criteria in the fields below. In specifying the state and county search criteria, you can make multiple selections by holding down the "Ctrl" key as you click on entries within a given search field. You can search for performance test reports in WebFIRE using partial or complete SCCs. If you use a partial SCC, you must specify the first six digits (first three SCC levels) in the search window. Do not use any wildcard characters (e.g., *) after the partial code (using wildcard characters will return 0 reports). At the results page for the report search, you will find instructions for viewing and downloading files.

Start Date (MM/DD/YYYY)

End Date (MM/DD/YYYY)

Start and End Date refer to a span of time that the files were submitted to EPA

Facility Name

State

- ALABAMA
- ALASKA
- AMERICAN SAMOA

 Control-Click for multiple selections

County

Control-Click for multiple selections

City

Zip Code

Report Type(s)

FRS ID

SCC

- Applications Center
- Basic Information
- Emissions Factors / AP42
- Emissions Factors & Estimation Tools
- CHIEF Archives

Registration for Email Notifications of WebFIRE Report Submissions

Completing and submitting the registration form below allows you to receive email notifications when compliance reports of interest to you are submitted to WebFIRE. After you fill out the registration form and click on the "Submit" button, you will receive a confirmation email stating that your registration account has been activated. If your registration information changes, you will need to [unregister](#) or use the link in the initial confirmation or subsequent notification emails and re-register using your current information. To discontinue the notification service, you must [unregister](#) or use the link contained in the notification emails.

After you have registered, you will receive email notifications when WebFIRE receives a compliance report that meets your criteria for notification. The email notification will specify the type of report and associated facility name and contain a link to WebFIRE that will direct you to the web page where you can view or download the reports.

In specifying the geographic area of interest, you must select one or more entries under the "State of Interest" field. You can refine your area of interest by specifying one or more counties within a state(s); however, this county-level criterion is optional. The list of counties in the drop-down menu depends on the state(s) of interest that you select. Consequently, if you change your state selection after you choose your county(ies) of interest, you must re-select your county(ies) of interest. You must also specify the frequency at which you want to receive notifications. For example, if you select "Monthly" as the frequency, you will receive an email notification each month that lists all of the compliance reports that were submitted to WebFIRE during the previous month for your area of interest.

First Name* (max. length is 50 characters)

Last Name* (max. length is 50 characters)

Title (max. length is 50 characters)

Organization (max. length is 50 characters)

Phone (xxx-xxx-xxxx)

Email Address* (max. length is 50 characters)

Re-type Email Address* (max. length is 50 characters)

State of Interest*

- All
- ALABAMA
- ALASKA

 Control-Click for multiple selections

County of Interest
 Control-Click for multiple selections

Report Type(s)*

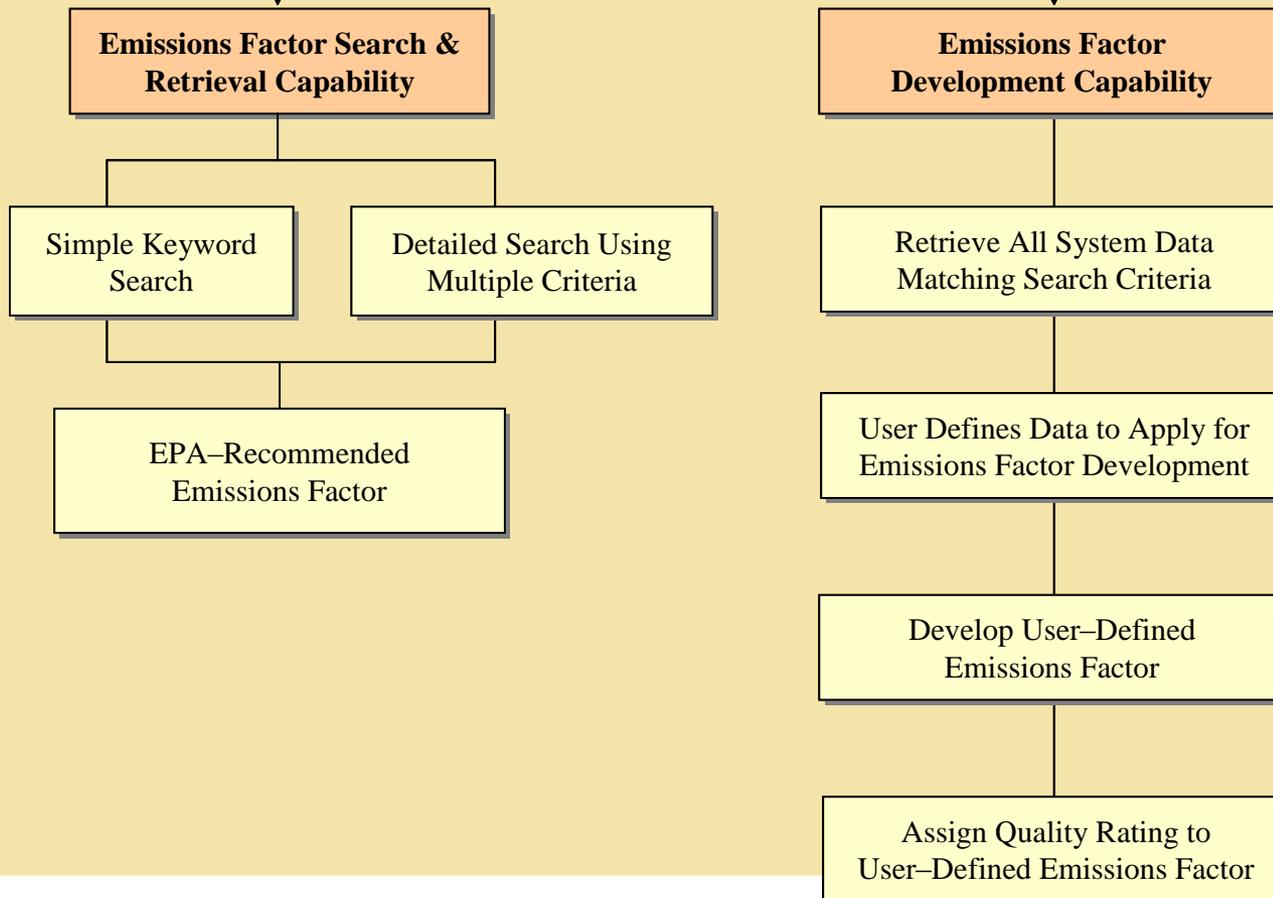
- Air Emissions Reports
- Notification of Compliance Status Reports

 Control-Click for multiple selections

Frequency of

WebFIRE Emission Factor Overview

WebFIRE Online
Database Application Capabilities



EPA's New EF Development Procedures

- ▶ Test data collected using the ERT (WebFIRE template for methods not supported by the ERT)
- ▶ ERT assigns quality rating to the individual test report
- ▶ ERT file submitted to WebFIRE via CEDRI (WebFIRE template can not be submitted via CEDRI)
- ▶ Statistical procedures for determining if data is below the method detection limit (MDL)
- ▶ Statistical procedures for identifying and removing outliers
- ▶ Emission factor derivation and quality assessment
- ▶ Statistical procedures for identifying valid data combinations

Minimum Detection Limits – Appendix B

- ▶ Only BDL's in a data set, no EF developed
- ▶ Mix of BDL and above MDL data, $\frac{1}{2}$ the MDL will be used for all BDL values
- ▶ If $\frac{1}{2}$ MDL is $>$ data sets highest value, that particular value won't be used in factor derivation

EF Outliers – Appendix C

- ▶ Fewer than 3 test results – no outliers
- ▶ 3-24 test results – Dixon Statistical test
- ▶ More than 24 test results – Rosner statistical text

EF Development – Data Quality procedures – App D

- ▶ (1) higher-quality data are preferred over lower - quality data, and
- ▶ (2) more test data values are preferred over fewer test Data values.
- ▶ Ratings no longer a letter grade (A, B, C, D)
 - ▶ Highly representative
 - ▶ Moderately representative
 - ▶ Poorly representative
- ▶ 2 different statistical procedures used to determine representativeness
 - ▶ Source categories containing 15 or fewer sources
 - ▶ Source categories greater than 15 sources

Statistical Techniques for Valid Data Combination

- ▶ Combine existing data with new data from electronic reporting
- ▶ Can't combine data from different SCC's

Public Review Process of Emissions factors

- ▶ Emission factor development/revisions is driven by the data received from E-Reporting
- ▶ Factors won't be drafted on any specific "time frame" – they'll be proposed periodically
- ▶ 60 day public comment period (extensions can be requested to the EPA)
- ▶ EPA Review public comments and determine if EPA EF should be revised/developed

Final Thoughts

- ▶ Electronic reporting is not the future; it's the now.
- ▶ Data Quality
 - ▶ Variety of purposes for data
 - ▶ Completeness
 - ▶ Detection limits
- ▶ State/Local Buy-in Importance
 - ▶ Electronic reporting as a whole
 - ▶ Reviewing test reports





Questions?

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