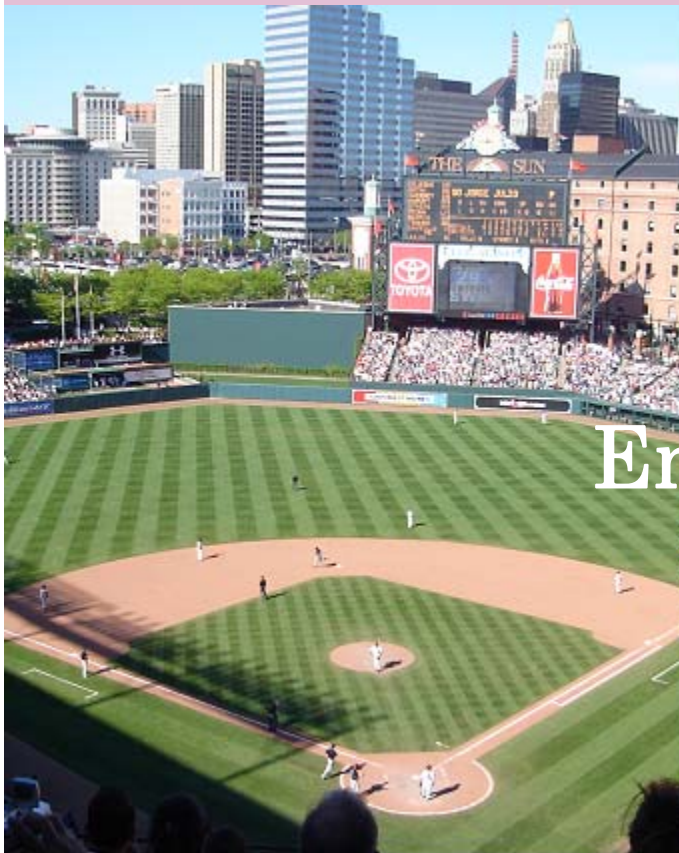




The Emissions Inventory System Process



Emissions Inventory Conference
April 16, 2009
Baltimore, MD

Purpose of the Course



Part One

Covers the new Emissions Inventory System (EIS) process.

- Preparing and submitting emissions inventory data
- Reviewing feedback
- Developing, analyzing, and releasing the NEI

Discuss upcoming EIS milestones.

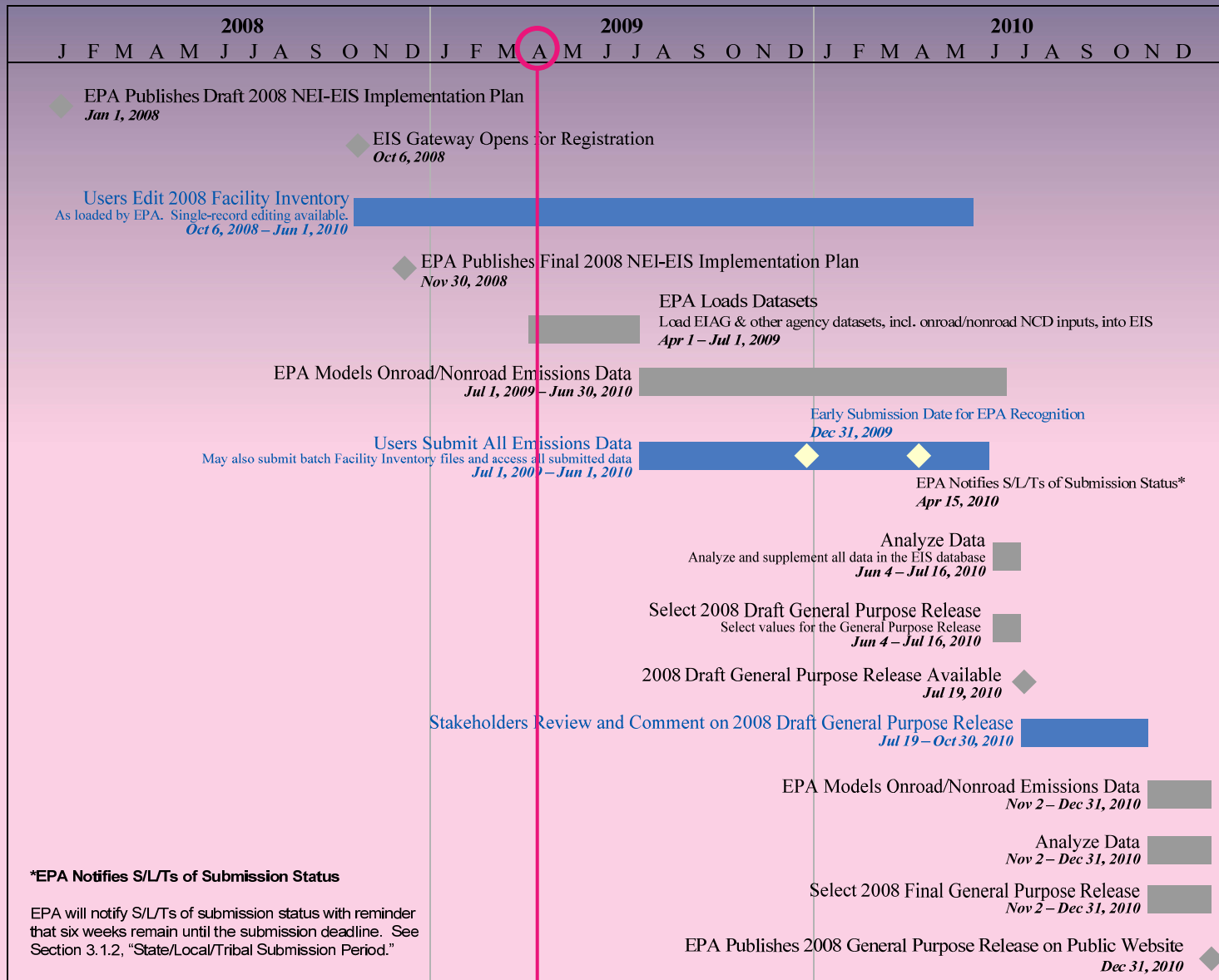
Part Two

A live demonstration of the EIS Gateway. This session will be followed by a general question and answer session on emissions inventory and EIS topics.



Part 1

EIS Process Time Line



EIS Process



- **New process is comprised of three time periods.**
 - Pre-Submission Period
 - Submission Period
 - Post Submission Period

Pre-Submission Period



- Period where EPA makes resources available for the upcoming inventory cycle.
- Generally begins six months before the start of the submission period.
 - For 2008 inventory cycle the Pre-Submission Period began on October 6th with the release of the EIS Gateway and elements of the 2008 NEI-EIS Implementation Plan.

Pre-Submission Period Available Resources



- **Available Now!**
 - Facility Inventory data.
 - Reporting instructions (Section 5-12 of the NEIP).
 - Consolidated Emissions Reporting Schema.
 - Code tables.
 - Quality assurance checks.
 - EIS Bridge and EIS Staging Tables.
- **Available Soon!**
 - Data sets.
 - Select Nonpoint sectors.
 - NMIM National County Database.
 - Onroad and Nonroad Emissions .
 - National Fire Emissions generated through SMARTFIRE.



Sample of EPA Calculation Emissions Sectors

Emissions Sector	ERTAC?	Year of Activity Data	Completion Date	Notes
Animal Husbandry	y	2008	Jun-09	EPA working with ERTAC on methods
Asphalt Paving: Cutback	y	2007	Jun-09	
Construction - Non-Residential	y	2008	Jun-09	
Construction - Residential	y	2008	Jun-09	
Construction - Road	y	2008	Jun-09	
Fertilizer Application	y	2008	Jun-09	
Fuel Combustion; Commercial/Institutional; Coal	y	2006	Done	
Fuel Combustion; Commercial/Institutional; Distillate Oil	y	2006	Done	
Fuel Combustion; Commercial/Institutional; Kerosine	y	2006	Done	
Fuel Combustion; Commercial/Institutional; Liquified Petroleum Gas	y	2006	Done	
Fuel Combustion; Commercial/Institutional; Natural Gas	y	2006	Done	

Pre-Submission Period



- What should S/L/Ts be doing now?
 - Register to use the EIS Gateway.
 - Make updates to facility inventory data through the EIS Gateway.
 - Review the reporting instructions.
 - Review code tables for codes that are no longer valid.
 - Review the list of QA checks.
 - Make decision of whether to implement the CERS or to use the EIS Bridge/EIS Staging Tables.
 - CDX Web users make the transition to the Web Client.

Pre-Submission Period New EIS Process



- **Facility Inventory**
 - Use of identifiers – Change
 - Facility Type and Unit Type – New
 - Facility and Unit Operating Status – New
 - Release Point Apportionment – New
 - Regulatory Code – Change
 - Control Approach revisions
 - Online editing through the EIS Gateway

Pre-Submission Period New EIS Process



- **Reporting Emissions**
 - No preliminary inventory.
 - Point emissions can be reported by themselves.
 - Point emissions can only be reported for existing facility processes; you must update facility inventory first.
 - All pollutants for a process must be submitted together.
 - S/L/T emissions **WILL NOT** be adjusted by EPA.
 - Only caveat is that EIS will convert all CAP emissions to tons and all HAP emissions to pounds, regardless of how they were submitted.

Pre-Submission Period New EIS Process



- **Point/Nonpoint**
 - Reporting Period has been simplified.
 - Emissions Operating Type for Point.
 - Emissions Calculation Method is required.
 - Capability to exclude geographic areas (Nonpoint).
 - Activity is required for Nonpoint (not Point).
 - Prescribed and AgFires can be reported in either Nonpoint or Events.

Pre-Submission Period New EIS Process



- **Airports**
 - Airports in Point (Aircraft engines, ground support equipment, boilers...).
 - Airports will not be accepted into Nonpoint.
 - May report traditional point sources located at an airport separately.
- **Locomotives and Marine Vessels**
 - Emissions can be associated with a shape file.

Pre-Submission Period New EIS Process



- **Onroad/Nonroad**
 - Submissions of activity inputs are preferred over Emissions.
 - No MOBILE6 inputs, only NCD.
 - EPA to use NMIM to calculate emissions.
 - EPA will convert NMIM NCD activity data to the MOVES format when available.
 - QA done on inputs as well as emissions.

Pre-Submission Period New EIS Process



- **Events Inventory**
 - Captures special temporal and spatial characteristics of Wildfires, Prescribed and Ag Burns.
 - May be used in the future for other non-routine or catastrophic short term events.
 - EPA will populate EIS with data obtained through SMARTFIRE.
 - Expect good coverage for fires over 100 acres; lesser coverage for smaller fires.

Submission Period



- **Period in which S/L/Ts submit their data to EIS.**
 - EIS Gateway: one record at a time for Facility Inventory.
 - EIS CERS XML file through the CDX Node for Facility Inventory and emissions data.
- **2008 inventory cycle submission period is from July 1, 2009 through June 1, 2010.**

Submission Period



- What will EPA be doing during the Submission Period?
 - Open the submission window to both the Quality Assurance and Production environments on July 1, 2009.
 - Generate emissions using submitted Onroad and Nonroad activity input data.
 - Provide feedback on all submissions.
 - Provide assistance to all submitters.

Submission Period



- What should S/L/Ts be doing during the Submission Period?
 - Generate and submit an EIS CERS XML file to EIS through the CDX Node.
 - Use the Quality Assurance environment.
 - Review and address issues identified in the submission feedback.
 - Correct facility inventory issues through the EIS Gateway or by an EIS CERS XML submission through the CDX Node.
 - Correct emissions issues by an EIS CERS XML submission through the CDX Node.
 - **RECOMMEND YOU SUBMIT TO PRODUCTION FOR THE FIRST TIME NO LATER THAN APRIL 15, 2010.**

Submission Period

Developing the EIS CERS XML file



- **Two ways to generate an EIS CERS XML file.**
 - Implement the CERS directly into your agency system.
 - Use the EIS Bridge and Staging Tables.
- **Implementing the EIS CERS directly into your agency system allows you to generate an EIS CERS XML file without using the EIS Staging Tables and EIS Bridge.**

Submission Period

EIS Bridge and Staging Tables



- EIS Staging Tables are an MS Access implementation of the EIS CERS data elements.
- Load your data into the staging tables.
 - Use Appendix 3: NIF Conversion Mapping.
- Import the EIS Staging Tables into the EIS Bridge.
- Generate an EIS CERS XML file.

Submission Period

EIS Flow Requirements



- **All data being submitted to the EIS through the CDX Node must be in EIS CERS XML file format.**
 - NMIM activity input data and shape files are attachments to the XML files.
- **Submissions can be made using your Agency Node, a Node Client, or the Web Client.**
 - EIS no longer supports CDX Web.
 - EIS Gateway does not support direct EIS CERS XML submissions.
- **All nodes and node clients must meet the Node 2.0 specifications.**
 - EIS will not accept a submission from a node or node client in a previous node specification, e.g., version 1.1.

Submission Period Requirements for Submitting Data



- Submissions through the CDX Node to the Production environment are only allowed when access is open.
- Submissions through the CDX Node to the Quality Assurance environment are always allowed.
- Updates to facility inventory data through the EIS Gateway are always allowed.

Submission Period

Requirements for Submitting Data



- Only one category of data, e.g., facility inventory, point, nonpoint, per zipped file. If more than one category of data is contained in the submission, the entire submission will be rejected.
- Submit data to the Quality Assurance or the Production environment. Data cannot be transferred from the Quality Assurance to the Production environment.
 - Identify in the Exchange header to which environment the data are being submitted.
- Partial submission of data can be made to either environment. However, all data required to support the partial submission must be included.

Submission Period Requirements for Submitting Data



- Additions to facility inventory data cannot be made through the QA environment. Additions to facility inventory data can only be made in the Production environment.
- Updates to facility inventory data must be made prior to the submission of point emissions.
- HAP and CAP emissions data must be submitted in the same file for the same data category.

Submission Period

Using the Quality Assurance Environment



- Quality Assurance environment allows you to check your data before submitting them to the Production environment.
 - Replaces the Basic Format and Content Checker and the Schematron.
- Provides early feedback on the quality of your submission.
 - Identifies data that will be rejected when submitted to the Production Environment.
 - Identifies data that will generate an error in the Production environment but that will still be accepted.

Submission Period

Using the Quality Assurance Environment



- What happens with submissions to the Quality Assurance environment:
 - Data are only stored long enough to provide feedback, then deleted from EIS.
 - EIS CERS XML files are stored for 5 business days, then deleted from EIS.
 - The feedback is stored for 5 business days, then deleted from the EIS.
 - Audit log tracks that a submission was made to the Quality Assurance environment.

Submission Period

Submitting to the Production Environment



- **Quality assurance checks are applied to your data**
 - Same quality assurance checks as applied in the Quality Assurance environment.
 - Data that pass the critical quality assurance checks are stored in EIS.
 - Data that fail the critical quality assurance checks are rejected.
- **XML files are archived at the CDX for one year.**
- **Feedback files are stored in EIS for one year.**
- **Submitted data are viewable through the EIS Gateway one business day after they are submitted.**

Submission Period Feedback



- **Feedback on the status of your submission.**
 - When your file is received by the CDX Node.
 - If there are any schema validation issues.
 - When your file is received by the EIS and is being processed.
 - When your QA feedback is ready for viewing.
- **Feedback on the quality of your data.**

Submission Period

Reviewing Data Quality Feedback



- Receive feedback from submission to Quality Assurance and Production environments.
- Available through the EIS Gateway.
 - View the feedback.
 - Download the feedback.
- **Feedback includes:**
 - Summary of the data accepted.
 - Listing of critical and warning errors.
 - Resolution messages.
 - Informational messages.

Submission Period

Using the EIS Gateway to View/Modify Data



- Data available through EIS Gateway one business day after submission.
 - Facility inventory (view and modify).
 - Emissions (view).
- S/L/T users with WRITE access can change their agency Facility Inventory data.
- Change one record at a time.
 - The EIS Gateway does not support direct EIS CERS XML submissions.

Post Submission Period



- Period after the submission window closes.
- EPA develops the NEI, performs analysis on the NEI, and creates the General Purpose Release.
- For the 2008 inventory cycle, Post Submission Period is from June 2, 2010 through December 31, 2010.

Post Submission Period

What is the NEI?



- Previous inventory cycle NEIs contained one value for each pollutant.
- EIS has the ability to store multiple emissions values for each pollutant.
- NEI is now a snapshot of all the data in the EIS when the submission window closes.
 - S/L/T submitted data.
 - EIAG and OTAQ generated data.
 - Data from other EOA databases, e.g., CAMD, TRI.
- Users will be able to select the most appropriate value for their application.

Post Submission Period

What is the General Purpose Release



- General Purpose Release is comprised of one value for each pollutant.
 - Comparable to the NEI of previous inventory cycles.
- Provided for S/L/T review and comment.
- Provided for public use.

Post Submission Period

Close the Submission Window



- **EPA closes the submission window on June 2, 2010.**
 - **ALLOWED:** Editing of facility inventory data through the EIS Gateway.
 - **NOT ALLOWED:** EIS CERS XML file submission through the CDX Node to the Production environment.
- **Submission window is closed so that:**
 - NEI can be created.
 - Analysis can be performed.
 - Draft General Purpose Release can be generated.

Post Submission Period

Who Has Access to the NEI?



- **Who has access:**
 - State, Local and Tribal agency users of the EIS Gateway have access to their data.
 - EPA users of the EIS Gateway have access to all data.
- **Who does not have access:**
 - General public.

Post Submission Period Data Analysis



- Analysis is performed on the NEI.
- Look at the data in ways that can't be done with the quality assurance checks.
- Two step process:
 - Step 1: Identify what was submitted?
 - Step 2: How do the submitted data compare to other data?
- Analysis period is June 4th through July 16th.

Post Submission Period Data Analysis – Step 1



- **Identify what was submitted:**
 - Which S/L/Ts submitted data?
 - Which data categories were submitted?
 - Which sectors were submitted?
 - Which pollutants were submitted?
 - Which data have unresolved warning errors?

Post Submission Period Data Analysis – Step 2



- **How do the submitted data compare to other data?**
 - Compare S/L/T data to other data sets.
 - Compare 2008 S/L/T submitted data to previous inventory data.
 - Compare Point emissions to Nonpoint emissions.
 - Compare emissions across geographic locations.
 - Review for duplicate wildfires.

Post Submission Period Data Analysis



- EPA will provide you with the results of the analysis.
- No data will be rejected as a result of the analysis.
- You are encouraged, but not required, to resubmit during the comment period to resolve any issue identified by the analysis.

Post Submission Period

Creating the General Purpose Release



- General Purpose Release is created by setting a hierarchy of use for emissions datasets in EIS.
- Emissions Datasets include:
 - State agency emissions.
 - Local agency emissions.
 - Tribal agency emissions.
 - EPA generated emissions.
 - Emissions obtained from other sources.

Post Submission Period Review and Comment on the Draft GPR



- Review and comment period is from July 19th through October 30th.
- General Purpose Release is made available for review and comment through the EIS Gateway.
- EIS CERS XML submissions through the CDX Node allowed from July 19th through October 30th.
- Questions or comments on the General Purpose Release can be sent through:
 - Support Request process in the EIS Gateway.
 - Individual EIAG contact.



Post Submission Period

Final Analysis/Create General Purpose Release

- This process lasts from November 2nd through December 31st.
- At close of review period, analysis process starts all over again.
 - Same as analysis performed at the close of the submission period.
- General Purpose Release is created in the same manner as before the start of the review period.



Post Submission Period

Make General Purpose Release Available to the Public

- General Purpose Release will be available through the:
 - EIS Gateway.
 - Public web site.

EIS Project Milestones



May 1

- Import CERS data into Staging Tables through the EIS Bridge.
- View emissions associated with facilities.
- View facility aggregate emissions report.
- Updates to the NEIP.

May 18

- Generate an EIS CERS XML file through the EIS Bridge.
- View nonpoint, Onroad and Nonroad emissions.

July 1

- EIS Flow is open.

Important Links



- Request Access to the EIS Gateway
<http://www.epa.gov/ttn/chief/eis/access.pdf>
- EIS Gateway
<https://eis.epa.gov/eis-system-web>
- 2008 NEI-EIS Implementation Plan
<http://www.epa.gov/ttn/chief/net/neip/index.html>
- Web Client
TEST: <https://nodeweb.epacdxnode.net/node2web>
PRODUCTION: <https://nodewebrrss.epa.gov/node2web>
(The production site will be ready in the coming months)

General Question and Answer Session

