Changes to EIS for the 2020 NEI

Jonathan Miller

Lead Information Technology Specialist

US EPA / OAR / OAQPS / OID / NADG

Why Are There Changes?

- Business Needs Change Over Time
  - Schema Hasn't Significantly Changed Since Released in 2010

- E-Enterprise and Consolidate Air Emissions Reporting (CAER) Project
  - Goal to Streamline the Reporting and Sharing of Air Emissions Data
  - Conducted Interviews with State, Local, Tribal Governments as Well as Private Industry

- TIMELINE
  - Finalize Data Format by December, 2019
  - Only the New Version Will be Accepted for the 2020 Emissions Inventory (June 2021)

Big Picture Summary

- Most of the New Fields are Not Required

- We Will be Removing Some Fields

- No Changes to How Emissions Data Will Be Reported (All Data Categories). All Changes Pertain to Facility Inventory Submissions

- Provides Us With the Opportunity to Change How Data is Submitted… or Not…
    - Option 1: Update the CERS Schema with These Changes & Use the Xchange Network
        - PROs: Least Impact on Users Submissions. Known Technology and Existing Issues
        - CONs: Remain on Existing Process Which Limits Changes
    - Option 2: New Non-XML Format (w/ XML Wrapper) and use Xchange Network
        - PROs: Greater Flexibility in Making Changes; Known Technology and Existing Issues
        - CONs: Greater Scope of Change Required by our Data Providers
    - Option 3: New Non-XML Format and Do Not Use the Xchange Network
        - PROs: Moves us closer in the Direction of Web Services and Maximizes Flexibility
        - CONs: Maximum Number of Changes and Greatest Risk due to Volume of Changes

Changes to Facility Information

- The Following Fields Will Be Added to the Facility Component, but Only Accessible by Inventory Developers (EPA – EIAG)
  - FacilitySourceTypeCode
  - LocationAddressIsReadOnly
  - FacilityNameIsReadOnly
  - LocalityIsReadOnly
  - PostalCodeIsReadOnly
  - HAPFacilityCategoryCode
  - LocationIsReadOnly
  - CoordinateTolerance

Changes to Unit Information

- New Fields (All Optional)
  - PermitStatusCode
  - PermitStatusBeginYear
  - PermitStatusEndYear
- Only Accessible by Inventory Developers (EPA – EIAG)
  - DesignCapacityIsReadOnly
  - UnitIsReadOnly

Changes to Process Information

- New Fields
  - EmissionsProcessStatusCode (Required)
  - EmissionsProcessStatusYear (Conditionally Required)
  - These Two Columns Will Replace "LastEmissionsYear"
- Only Accessible by Inventory Developers (EPA – EIAG)
  - EmissionsProcessIsReadOnly
- Changing the Way We Store Alternate Emissions Process Identifiers, but No Change in What you Will Report for this Information.

Changes to Reporting Release Points

- Historically Only 1 Release Point Type Code for "Fugitives" Descriptions
  - There was Only 1 Release Point Type Code for "Fugitives". Now There Are 3:
    - AREA (Historical) - Coordinates in the Southwest Corner of the Fugitive Source
    - 2D
    - 3D
- Moving to Either "2D" or "3D" Description of Release Points
  - Requires Fugitive Height
  - Requires Fugitive Width
  - Fugitive Length Not Allowed for 2D
  - 2D Requires 2 Sets of Coordinates (Lat/Long of the Midpoints of Opposing Sides of Source)
  - 3D Requires Center Coordinates of Source Footprint
- We Will Convert All Existing Fugitive Data to be of the "Area" Type
- If you Change the Release Point Data, You will Need to Define it as Either "2D" or "3D"

Changes to Release Point Information

- New Fields
  - ReleasePointGeographicCoordinates Component
    - ReleasePointCoordinateTypeCode (2D Point1, 2D Point2, Source Center, Southwest Corner)
- Only Accessible by Inventory Developers (EPA – EIAG)
  - ReleasePointIsReadOnly
  - ReleasePointExitGasFlowIsReadOnly
  - ReleasePointExitGasVelocityIsReadOnly
  - ReleasePointExitGasTemperatureIsReadOnly
  - ReleasePointStackDiameterIsReadOnly
  - ReleasePointStackHeightIsReadOnly
- Changing the Way We Store Alternate Release Point Identifiers, but No Change in What you Will Report for this Information.

Changes to the Reporting of Controls

▶ And then there are Controls…

▶ In EIS Today, a "Control Approach" Defines a Collection of Controls that Apply to a Unit or a Process

　▶ Multiple Control Measures (Scrubber, Precipitator, etc)

　▶ Multiple Pollutants Being Controlled With an Overall % Redux Reflecting All of the Control Devices in the Control Approach

　▶ Has an Overall % Capture Efficiency, and % Effectiveness

　▶ Current Model Says Every Measure Controls Every Pollutant (Which We Know is Not True)

▶ Removing the ControlApproach and All Sub Components Related to Controls

▶ The New Model Will Have an Inventory of Controls at the Site Level That Can be Referenced (With IDs) and Reused by Multiple Components (Units, Processes, and/or Release Points)

▶ Multiple Controls Will Be Linked By New Concept Called a "Path"

What We Gain With the New Model

- Things We Can't Do Today:
  - Be Able to Describe How Controls are Configured at a Facility
  - Be Able to Define the Relationship Between Controls and Units, Process, and / or Release Points
  - Be Able to Reuse the Definitions as the Same Controls Can be Shared Between Many Other Components (Units, Processes, and Release Points)
    - Controls Will Have an EIS Control ID
    - Controls May Have Agency IDs as Well
  - Be Able to Have Greater Access to Change the Property Values of the Control Information
- Things We Can Do Today
  - Need to Be Able to Show the Overall Control Reduction Percentage for a Given Combination of Process – Release Point – Pollutant Combination

Event Emissions

▶ Still Under Discussion With the Events Lead (Tesh Rao)

▶ Want to Streamline What Information Is Collected

▶ Possibly Provide a Mechanism to Submit Activity File (Similar to OnRoad & NonRoad)

Recap

- Changes Relate to the Facility Inventory Information
- Most Changes Are Optional Fields
- Some Business Rule Changes (Especially for Release Point Information)
- BIG Changes in Point Control Information
- Likely to be Changes in How Event Emissions Are Submitted
- All Changes Will be Finalized and Published by the End of 2019
- All Changes Will take Effect for the 2020 NEI Cycle (June of 2021)