

Changes to the Consolidated Emissions Reporting Schema (CERS) for the 2020 National Emissions Inventory

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Changes and Corrections from the March Version

- 1) In the FacilitySiteGeographicCoordinates component listed in the appendix, changed a typographical error “VerticalMethodCode” to “VerificationMethodCode”. This item was not intended to be changed from the current name.
- 2) We have made some changes to the ReleasePoint component to accommodate rectangular stack release points. Please see “Changes Listed by Component” for more details.
 - a. We have made the following name changes to these components:
 - i. “ReleasePointFugitiveLengthMeasure” → “ReleasePointLengthMeasure”
 - ii. “ReleasePointFugitiveWidthMeasure” → “ReleasePointWidthMeasure”
 - iii. “ReleasePointFugitiveLengthUnitOfMeasureCode” → “ReleasePointLengthUnitOfMeasureCode”
 - iv. “ReleasePointFugitiveWidthUnitOfMeasureCode” → “ReleasePointWidthUnitOfMeasureCode”
 - b. We have changed the sequence of where these 4 columns appear. They all now appear after “ReleasePointStackDiameterUnitOfMeasureCode”. See the Appendix for more details.
- 3) We have added two new attributes to the ReleasePoint component (both only accessible by Inventory Developers):
 - a. ReleasePointLengthsReadOnly
 - b. ReleasePointWidthsReadOnly
- 4) We have added a new attribute on the ReleasePointApportionment component: “ReleasePointApportionmentIsUncontrolled”. This element provides an explicit method of conveying that there are no control components for the release point apportionment (rather than it being derived by the lack of control information).
- 5) Updated “Figure 1” to show the new ControlPathControlPollutant component as well as changes to the names of SiteControlPollutant and SiteControlIdentification (see #6, #7, #8 below).
- 6) Changed the name of component “ControlPollutants” (under FacilitySiteControls) to “SiteControlPollutant”.
- 7) Changed the name of component “ControlIdentification” (from FacilitySiteControls) to “SiteControlIdentification”.
 - a) In order to accommodate agencies who are unable to provide the more granular control data information, we have added the component “ControlPathControlPollutant” Within the SitePath component. This is designed to provide the ability to report the overall percent reduction values on a per pollutant basis (like how the current Control Approach → Control Pollutant module works).
 - b) A new element has been added to the FacilitySitePath component to mimic the existing functionality of assigning an overall percent effectiveness values to a given path: PathControlEffectiveness.
- 8) Added the definition for the new component “DeleteReportingPeriod” in Appendix A. This new component will remove all emissions, supplemental calculation parameters, and activity information for the specified reporting period. This component may be supplied for Point, Non-Point, Non-Road, and On-Road emissions types.

Changes from the May 22, 2020 Version

- 1) The diagram of the CERS components (Figure 1) has been corrected to show appropriate component names.

Changes from the July 30, 2020 Version

- 1) The component name “NAICSPPrimaryIndicator” has been changed to “NAICSType”.
- 2) The wrong list of attributes was provided for the ControlPathControlPollutant component. The correct list of attributes exists in this version of the document.
- 3) PermitStatusCode, PermitStatusBeginYear, and PermitStatusEndYear are attributes only accessible by Inventory Developers. Previous versions indicated these fields were available to all users.
- 4) All XML examples (pages 21 – 28) have been updated to indicate proper component names, attribute names, and positions.
- 5) Updated “Figure 5” to correctly show the ReportingPeriod component belonging to EmissionsUnitProcess (not EmissionsProcessIdentification).

Changes from the September 30, 2020 Version

- 1) Appendix A: Changed the number of decimal positions that can be reported for ControlPathDefinition.AveragePercentApportionment to be 2 decimal positions.
- 2) Appendix A: Changed the number of decimal positions that can be reported for ControlPollutant.PercentControlReductionEfficiency to be 3 decimal positions.
- 3) Appendix A: Changed the number of decimal positions that can be reported for FacilitySiteControl.PercentControlEffectiveness to be 3 decimal positions.
- 4) Appendix A: Changed the number of decimal positions that can be reported for FacilitySitePath.PercentControlEffectiveness to be 3 decimal positions.
- 5) Appendix A: Changed the number of decimal positions that can be reported for ReleasePointApportionment.AveragePercentEmissions to be 2.
- 6) Appendix A: Updated field definitions for the following components:
 - a. ControlPollutant.PercentControlReductionEfficiency
 - b. FacilitySiteControls.PercentControlEffectiveness
 - c. FacilitySitePath.PercentControlEffectiveness
 - d. ReleasePointApportionment.AveragePercentEmissions
 - e. ReleasePointApportionment.ReleasePointApportionmentIsUncontrolled
 - f. ControlPathDefinition.SequenceNumber
 - g. ControlPathDefinition.AveragePercentApportionment

Overview

The Consolidated Emissions Reporting Schema (CERS) is used by the Emissions Inventory System (EIS) to provide a standardized structure for submitting emissions inventory data to the United States Environmental Protection Agency (EPA). CERS has remained relatively unchanged since being adopted by EIS in 2008. Due to changes in program requirements, requests from our user community, and changes in the goals of data sharing within EPA, there is a need to make changes to the CERS to support these additional needs. This document describes the final version of the CERS schema to be used for the 2020 National Emissions Inventory submission.

This document will describe changes, deletions, and additions to each of the components of the CERS. This includes which user groups are impacted by the changes. A separate document outlining the quality assurance edit checks that will be performed by EIS will be developed once a final version of the CERS changes is published.

Most of the changes being considered apply to the Facility Inventory data category. There is one significant change to the reporting of emissions data for Point and Location emissions. The CERS schema has a new component (DeleteReportingPeriod) which can be used to **remove all** emissions, supplemental calculation parameters, and meta data pertaining to a reporting period. This is intended to delete data that may have been entered erroneously.

All comments for the content of this document should be directed to “Contact Us About Air Emissions Inventories” page at <https://www.epa.gov/air-emissions-inventories/forms/contact-us-about-air-emissions-inventories>.

Facility Inventory CERS Components

“Figure – 1” below shows the relational hierarchy of the components within the Facility Inventory structure of the revised CERS.

There are a few items to note:

- 1) There is no longer a UnitControlApproach or ProcessControlApproach component. Due to a change in the requirements of information to be stored related to controls for EIS, a substantial change was required. These changes to the controls will be discussed in greater detail later in the document (See “About Controls”).
- 2) There are several new components (all related to controls) that have been added:
 - a. FacilitySiteControls
 - i. ControlPollutant
 - ii. ControlIdentification
 - b. FacilitySitePath
 - i. ControlPathDefinition
 - ii. ControlPathIdentification
 - c. ReleasePointApportionmentPathIdentification

The following sections will describe in greater detail changes to each of these components.

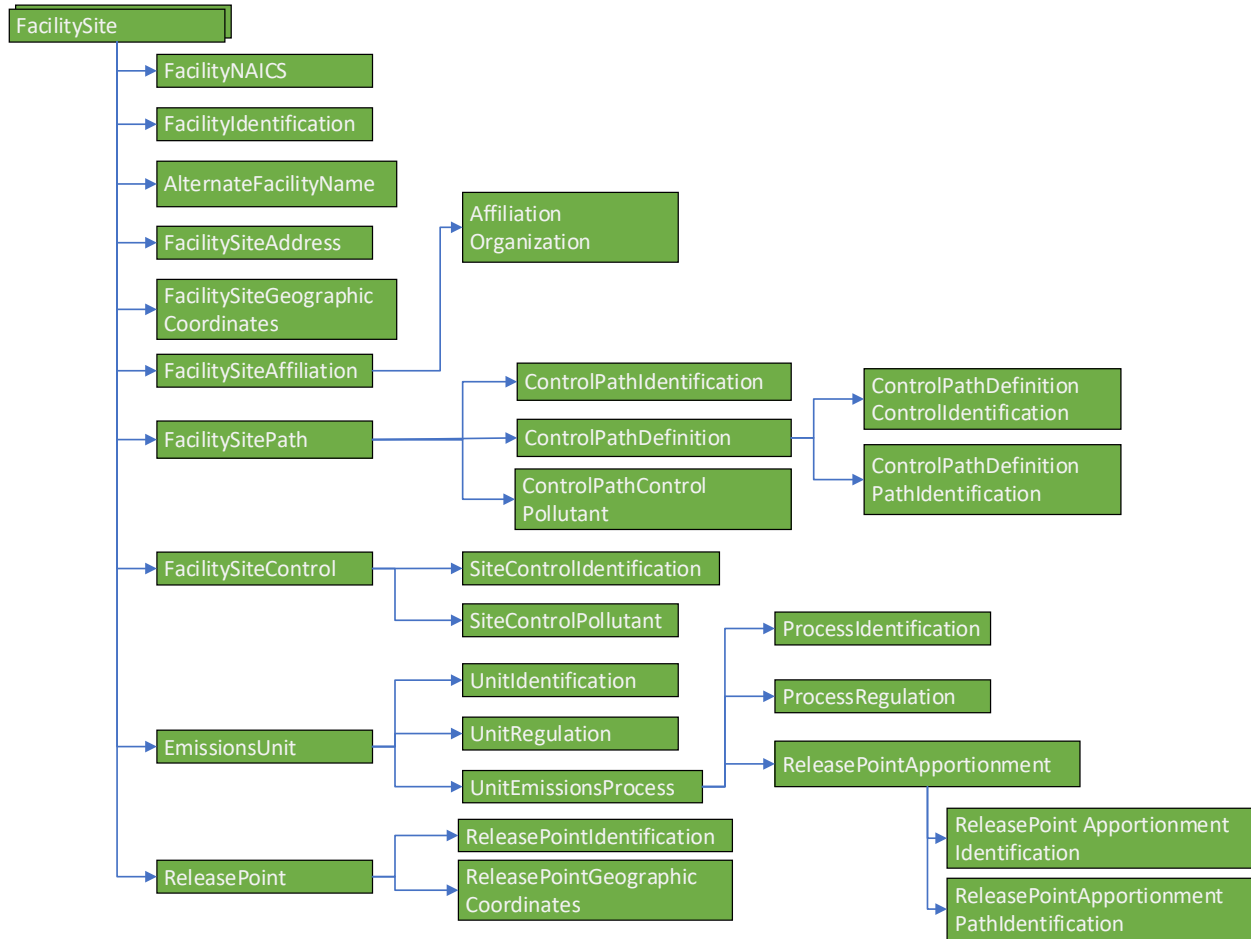


Figure 1: CERS Components for Facility Inventories

General Notes

The following sections describe *changes* to the existing CERS and will not contain all attributes contained within the component. It may be assumed that if an attribute is not listed within each component, the current names, definitions, and rules about that attribute are unchanged. This section does not address the new components associated with controls. Those elements will be discussed in a separate section of this document.

Please refer to “Appendix A: CERS Attribute List” to see the order of where each of these attributes appear within the component.

Description of Roles Within EIS

There are several roles that a user may have within EIS. The role assigned to a user dictates what functions and fields may be available. For purposes of this document, the two roles of note are

Role Name	Role Description
Inventory Developer	This role is usually a representative of OAQPS’ Emissions Inventory and Analysis Group. This role has the overview responsibility for the data provided to EIS. Inventory Developers can view all facility site information contained within EIS, may set values that are used in quality assurance checks, and able to “lock” specific fields or records within the facility inventory. Data that has been locked cannot be modified by anyone until the lock is removed.
SLT User	An acronym meaning “State, Local, or Tribal User”. SLT Users provide data from their organization to the EPA. SLT Users may only provide data for the facilities and locations that their agencies have been granted access.

Changes Listed by Component

The green-highlighted items listed are accessible by all users. Those fields without highlights are only accessible by Inventory Developers. If an SLT user tries to use one of these fields, a “warning” message will appear on their feedback report indicating that the user does not have access to these fields and the information will be ignored. All other information about the submitted record will be processed.

Most of the new fields are additions to existing components and are not required. There are some notable exceptions:

1. When providing a **FacilityNAICS** component, it is suggested you provide a **NAICSType**. If a NAICSType is not provided, it will be assumed the record was intended to be a “PRIMARY” NAICS type and all edit checks will continue with that assumption. Historically, EIS has only carried the “PRIMARY” NAICS indicator. Going forward, you must still provide 1 and only 1 “PRIMARY” type of NAICS indicator for a new facility. You may also provide as many “SECONDARY” or “TERTIARY” NAICS values as you would like. No “SECONDARY” or “TERTIARY” NAICS values are required. However, any provided SECONDARY or TERTIARY NAICS code definitions must be unique for the facility.
2. Within the **EmissionsProcess** component, the **LastInventoryYear** field will no longer be used by EIS. Instead, **ProcessStatusCode** and **ProcessStatusCodeYear** will be used to define the status of a given emissions process. The **ProcessStatusCode** is a required column for new emission processes. The **ProcessStatusCodeYear** is required if the **ProcessStatusCode** is not “OP” (“operational”). This is consistent with other facility component types.

Component	Attribute	Notes
FacilitySite	FacilitySourceTypeCode	New item only accessible by Inventory Developers
FacilitySite	HAPFacilityCategoryCode	New item only accessible by Inventory Developers
FacilitySite	CoordinateTolerance	New item only accessible by Inventory Developers
FacilitySite	FacilityNameIsReadOnly	New item only accessible by Inventory Developers
FacilitySite	LocationIsReadOnly	New item only accessible by Inventory Developers
FacilitySite	LocationAddressIsReadOnly	New item only accessible by Inventory Developers
FacilityIdentification	FacilityIdentifierIsReadOnly	New item only accessible by Inventory Developers
FacilityNAICS	NAICSType	Allowable values will be "PRIMARY", "SECONDARY", "TERTIARY". A facility must have 1 PRIMARY NAICSType value. Multiple NAICS of other types may be specified but are not required. If no value is provided, a value of "PRIMARY" will be assumed.
FacilitySiteAddress	LocalityIsReadOnly	New item only accessible by Inventory Developers
FacilitySiteAddress	PostalCodeIsReadOnly	New item only accessible by Inventory Developers
FacilitySiteGeographic Coordinates	GeographicCoordinateIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint GeographicCoordinates	MidPoint2LatitudeMeasure	New item for all users. Required for new "2-Dimensional Fugitive" Release Point Type. Not allowed otherwise. Not used for FacilitySiteGeographic Coordinates component. See "New Fugitive Release Point Types" below for more information.
ReleasePoint GeographicCoordinates	MidPoint2LongitudeMeasure	New item for all users. Required for new "2-Dimensional Fugitive" Release Point Type. Not allowed otherwise. Not used for FacilitySiteGeographic Coordinates component. See "New Fugitive Release Point Types" below for more information.
ReleasePoint GeographicCoordinates	GeographicCoordinateIsReadOnly	New item only accessible by Inventory Developers
EmissionsUnit	PermitStatusCode	New item only accessible by Inventory Developers

Component	Attribute	Notes
EmissionsUnit	PermitStatusBeginYear	New item only accessible by Inventory Developers
EmissionsUnit	PermitStatusEndYear	New item only accessible by Inventory Developers
EmissionsUnit	DesignCapacityIsReadOnly	New item only accessible by Inventory Developers
EmissionsUnit	UnitsIsReadOnly	New item only accessible by Inventory Developers
UnitIdentification	IdentifierIsReadOnly	New item only accessible by Inventory Developers
UnitRegulation	RegulationIsReadOnly	New item only accessible by Inventory Developers
ProcessRegulation	RegulationIsReadOnly	New item only accessible by Inventory Developers
EmissionsProcess	ProcessStatusCode	New item for all users. This field is required.
EmissionsProcess	ProcessStatusCodeYear	New item for all users. This field is conditionally required.
EmissionsProcess	ProcessIsReadOnly	New item only accessible by Inventory Developers
EmissionsProcess	LastEmissionsYear	DELETED FOR EIS - This item will no longer be available for EIS. The fields ProcessStatusCode and ProcessStatusCodeYear will replace the function of this "LastEmissionsYear" for a process.
ProcessIdentification	EffectiveDate	New item for all users. Optional.
ProcessIdentification	EndDate	New item for all users. Optional.
ProcessIdentification	IdentifierIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint Apportionment PathIdentification	ReleasePointApportionment Identifier	New item for all users. This field is not required. Will be discussed further in the "About Controls" portion of the document.
ReleasePoint Apportionment PathIdentification	ProgramSystemCode	New item for all users. This field is not required.
ReleasePoint Apportionment	ReleasePointApportionment IsUncontrolled	Users can explicitly define a release point apportionment as not being subject to emission control devices.
ReleasePoint Apportionment	ReleasePointApportionment PathIdentification Component	Allows the ability to identify a control path utilized by the emissions in a release point apportionment.
ReleasePoint	ReleasePointWidthMeasure	Name changed from "ReleasePointFugitive LengthMeasure". Positioned after

Component	Attribute	Notes
		"ReleasePointStackDiameter UnitOfMeasureCode"
ReleasePoint	ReleasePointWidthUnitOfMeasure Code	Name changed from "ReleasePointFugitive WidthUnitOfMeasureCode". Positioned after ReleasePointWidthMeasure.
ReleasePoint	ReleasePointLengthMeasure	Name changed from "ReleasePointFugitive LengthMeasure". Positioned after ReleasePointWidthUnitOf MeasureCode.
ReleasePoint	ReleasePointLengthUnitOfMeasure Code	Name changed from "ReleasePointFugitive LengthUnitOfMeasureCode". Positioned after ReleasePointLengthMeasure.
ReleasePoint	ReleasePointIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint	StackHeightIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint	StackDiameterIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint	ExitGasVelocityIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint	ExitGasFlowRatesIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint	ExitGasTemperatureIsReadOnly	New item only accessible by Inventory Developers
ReleasePoint Identification	EffectiveDate	New item for all users. This field is not required.
ReleasePoint Identification	EndDate	New item for all users. This field is not required.
ReleasePoint Identification	IdentifierIsReadOnly	New item only accessible by Inventory Developers

New Fugitive Release Point Types

From suggestions made by the Sectors, Policy, and Programs Division (SPPD), two new types of fugitive types and a new “low flow vent” stack type will be available. This new method of defining fugitive information is designed to be easier to collect, report, and interpret. These new stack types are:

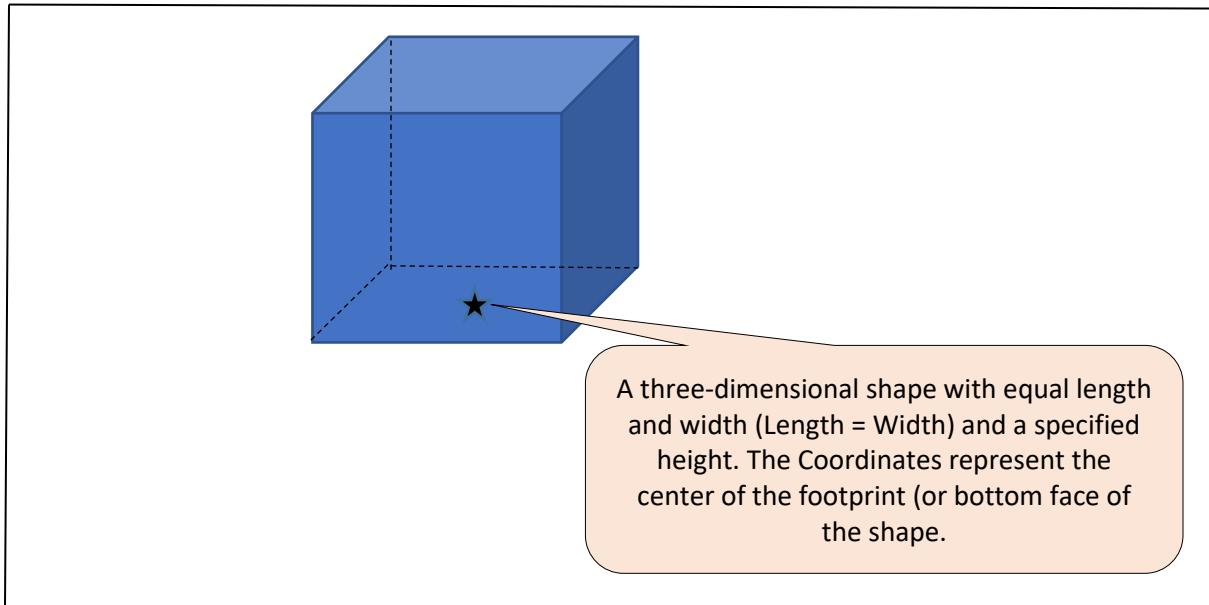
Release Point Type Code	Release Point Type Description	Release Point Type
7	Fugitive 3-Dimensional	Fugitive
8	Low Flow Vent	Stack
9	Fugitive 2-Dimensional	Fugitive

All other release point types that are currently available in EIS will continue to be available. However, these new fugitive types of release points do require different types of information. See below for more details.

Fugitive 3-Dimensional Fugitive Release Point Type

Fugitive three-dimensional source usually have multiple release vents. A few examples would be a building with many wall and roof vents or an outdoor material storage pile. Required parameters are:

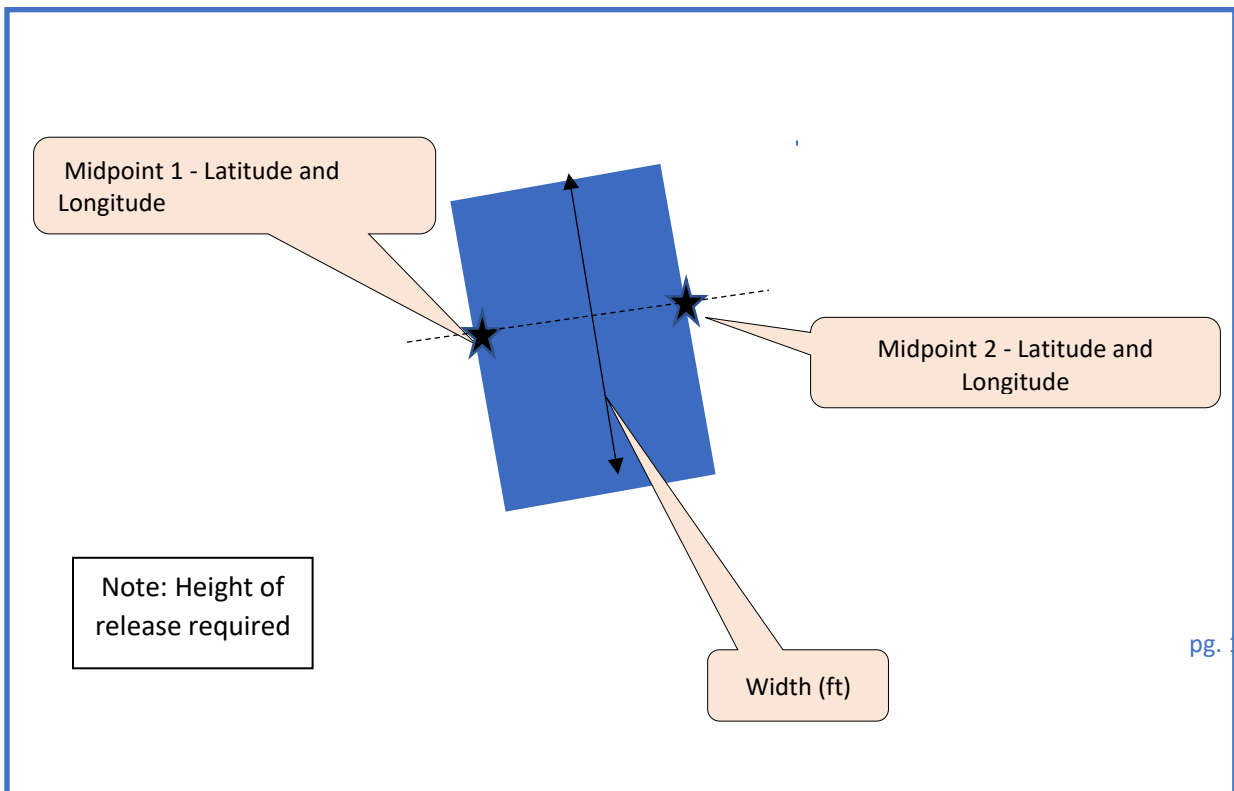
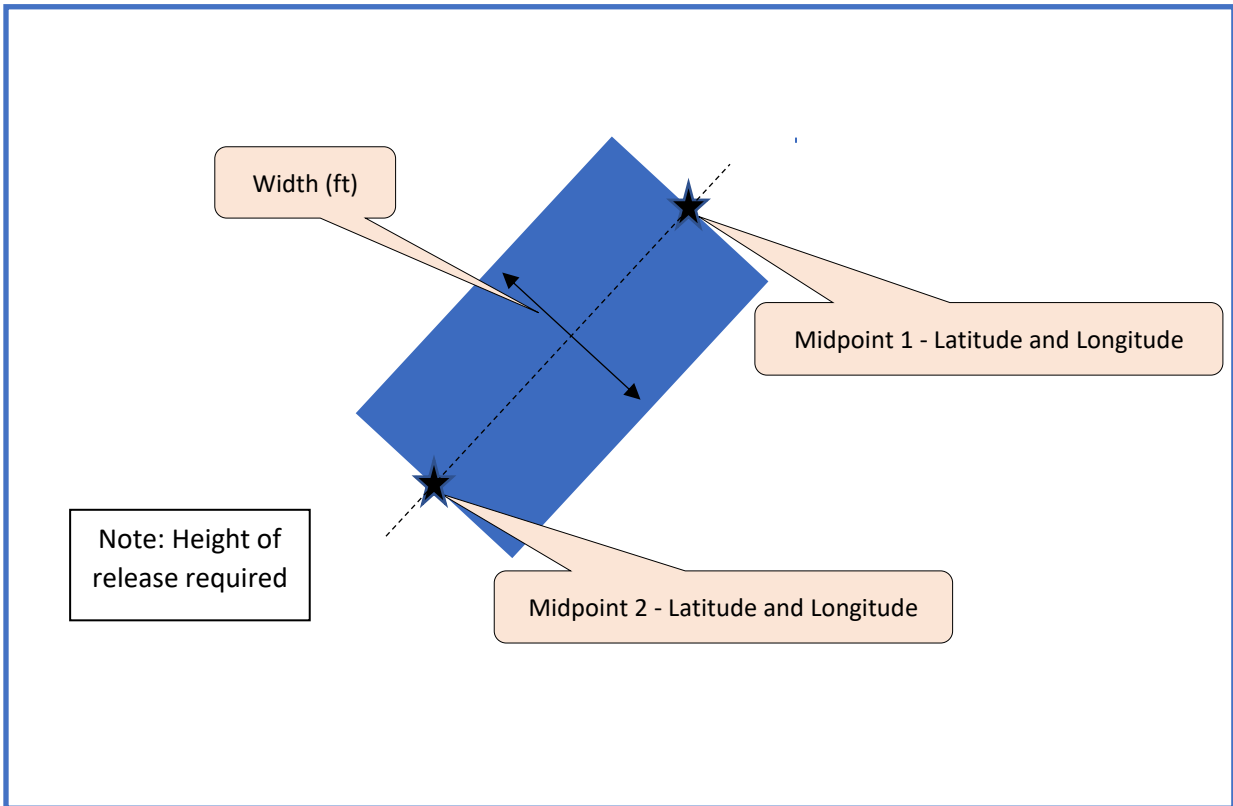
- side length (ft) [length and width are equal with three-dimensional sources]
- One set of coordinates (latitude and longitude) representing the center of the footprint of the bottom face of the square prism.
- height of the three-dimensional source



Fugitive 2-Dimensional Fugitive Release Point Type

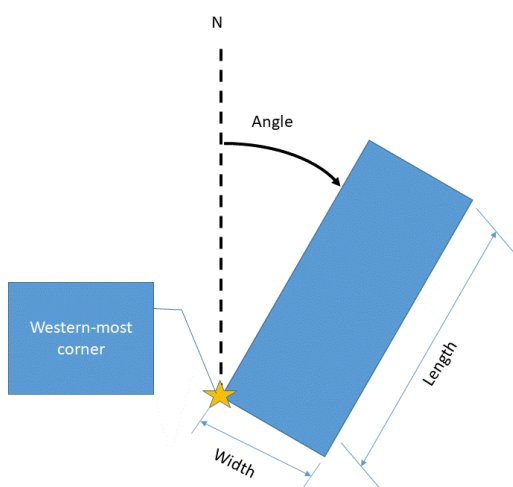
Fugitive two-dimensional source (>10sqft) is an emission release on one plane. For example, an elongated roof vent or a wastewater holding pond. Required parameters are:

- Two sets of Coordinates. Pick the midpoints of two opposing sides of the source and enter the coordinates for these two midpoints.
- A width is also required, which is the distance between the remaining two sides of the source (that is, the width is perpendicular to the line between the two midpoints). For irregularly shaped sources, first create a rectangle that best approximates the shape of the actual source, then determine the parameters described above. Also, estimate the height where the release occurs.



Source Characterization of Fugitive Sources

You will be allowed to continue to report fugitive data as it has in the past (using release point type code = "1"). The following clarifications on how we characterize fugitive emission release point angles and dimensions are offered. This set of instructions are used to improve air dispersion modeling in support of the National Air Toxics Assessment (NATA). The QA check that restricts the fugitive angle measure, EIS variable "Fugitive Angle (DEG)", is now limited to between zero (0) and 89 degrees of rotation, no longer 180 degrees. The latitude/longitude coordinates for the fugitive release point should be reported as those of the most western corner, and the angle is measured clockwise around that point from true (not magnetic) north. The "Fugitive Width (FT)" EIS variable is the measure along the side that would run in the East-West direction if the angle were 0 degrees and the "Fugitive Length (FT)" EIS variable is the measure along the side that would run North-South if the angle were 0 degrees.



Low Flow Vent

The new "Low Flow Vent" stack type is designed to provide a more descriptive alternative for vents that have low flow associated with them. This is considered a "stack" type of parameter because the information that you collect and what is required for this type of a release point are identical to regular types of stack parameters.

Rectangular Stack Release Points

EIS will allow the ability to report rectangular-shaped release points starting with the 2020 Emissions Inventory. For the 2020 Facility Inventory, stack release points will have to have 1 of the following:

- 1) Report Stack Diameter AND Stack Diameter Unit or Measure AND **do not report** Release Point Length AND **do not report** Release Point Width

OR

- 2) Report Release Point Length AND Release Point Width AND **do not report** Stack Diameter.

Please see the attribute name changes, along with changes to their sequence within the ReleasePoint component, in the Appendix.

About Controls

One of the new elements being introduced is how emissions control equipment is being tracked and used within EIS. The new control modules perform the following functions:

- 1) Allow the same control to be used by many different processes. This is to reduce the number of times that the control information needs to be entered.
- 2) Allow the ability to determine the configuration of how the controls are connected to each other at the facility. This includes the ability to model controls that are connected in a series or in parallel (the stream is split into multiple control streams).
- 3) Retain the ability to be able to calculate the percent emissions reduction for a given pollutant as the emissions stream travels from the generating emissions process to the emissions release point.

Control Components

In order to meet these needs, significant changes to what is stored within EIS were required. You will notice in **Figure 1 – CERS Components** (page 4) there are several new components listed under the **FacilitySite** component:

- **FacilitySiteControls**

Contains information about the type of control being defined at the facility. Each piece of control equipment will need to be reported separately. The **FacilitySiteControls** component has the following attributes:

Attribute	Notes
ControlMeasureCode	Required item. Must exist in the EIS Control Measures Code table.
ControlDescription	Optional
PercentControlEffectiveness	Optional, but will be set to 100 if not specified. May be specified to 3 decimal positions.
ControlUpgradeDate	Optional
ControlUpgradeDescription	Optional
ControlStatusCode	Required.
ControlStatusYear	Required if the ControlStatusCode is not "OP"
ControlNumberOperatingMonths	Optional. Must be an integer between 1 and 12 if specified
ControlStartDate	Optional.
ControlEndDate	Optional
ControlComment	Optional
ControlsReadOnly	May only be populated by Inventory Developers.

The **FacilitySiteControls** components have multiple sub-components:

- **SiteControlPollutant** – Provides a list of pollutants the piece of control equipment is designed to control. This component has the following attributes:

Attribute	Notes
PollutantCode	Required item. Must exist in the EIS Pollutant Code table.
PercentControlReductionEfficiency	Required.

- **SiteControlIdentification** – The agency identifier used to track the piece of control equipment. Each agency must provide an identifier for the piece of control equipment. This component has the following attributes:

Attribute	Notes
Identifier	Required.
ProgramSystemCode	Required. Must exist within the EIS Program System Code table.
EffectiveDate	Optional
EndDate	Optional
AlternativeIDsReadOnly	May only be populated by Inventory Developers.

- **FacilitySitePath**

The Control Path is used to define a configuration of controls used at the facility. The component has the following attributes:

Attribute	Notes
PathName	Required.
PercentPathEffectiveness	Optional. May be specified to 3 decimal positions.
PathDescription	Optional
PathsReadOnly	May only be populated by Inventory Developers.

- **PathDefinition** – Determines how the **FacilitySiteControls** relate to each other at the facility. The order of the controls must be specified. In cases where the emissions stream splits, the percentage of the emissions stream must be specified. This splitting of the emissions stream will cause the controls to be working in parallel until the stream meet later in the path definition. Due to the potential complicated configurations of controls, a given path definition may utilize site controls or other path definitions. Please see the examples below for an illustration of how these situations are handled. The component has the following attributes:

Attribute	Notes
SequenceNumber	Required. You may use the same SequenceNumber within a single PathDefinition to indicate that the control stream has split into multiple streams. The total of all AveragepercentApportionment values with the same SequenceNumber must add to be 100.
AveragePercentApportionment	Required. Must be a value between 1 and 100. The sum of all AveragepercentApportionment values having the same SequenceNumber must equal 100. May be reported to 2 decimal places.

- **ControlPathIdentification** – The agency identifier used to track the given path. Each agency must provide an identifier for each path to be defined. The component has the following attributes:

Attribute	Notes
Identifier	Required.
ProgramSystemCode	Required. Must exist within the EIS Program System Code table.
EffectiveDate	Optional
EndDate	Optional
AlternativeIDsReadOnly	May only be populated by Inventory Developers.

- **ControlPathControlPollutant** – This component captures the overall percent reductions on a per pollutant basis across the entire path. This is analogous to the existing “ControlPollutant” component that is reported with the existing “ControlApproach” component.

Attribute	Notes
PollutantCode	Required item. Must exist in the EIS Pollutant Code table.
PercentControlReductionEfficiency	Required. May be specified to 3 decimal positions.

- Once the **FacilitySiteControls** and **FacilitySitePath** have been defined, you must link the completed **FacilitySitePath** to the **ReleasePointApportionment** item that utilizes the controls in the given path. Within the FacilitySitePath you may also specify the overall percent effectiveness (the “uptime”) for the path (in a similar way that is accomplished now at either the Unit or Process level with the Control Approach).

Control Path Example 1 – Single Control

In the current EIS method of defining controls, over 90% of the control approaches have one control within the control approach. This corresponds in the new model to say there is a single control within the control path. Fortunately, these are the easiest types of scenarios to construct. For this example, we will consider a facility with a thermal spray booth that performs plasma arc spraying of powdered metal (source classification code (SCC) = “30904020”). This facility also has an annular ring filter control device (EIS control device code = “64”) with the following properties:

- State agency Control identifier = “SLTDNR – TORIT1”
- Control Measure = Annular ring filter (Code = 64)
- Control Description = “one Torit Cartridge filter”
- Percent Effectiveness (the percent of time the control device is operating) = 100
- Upgrade Date = [blank]
- Upgrade Description = [blank]
- Control Status Code = Operating (EIS Operational Code = “OP”)
- Control Status Year = 2008
- Number of Operating Months = 12
- Control Start Date = 2008-01-01
- Control End Date = [blank]
- Control Comment = “Example 1 Test Control Device”
- Pollutants Controlled:

- PM25-PRI – 99.9% Reduction Efficiency
- PM10-PRI – 99.9% Reduction Efficiency

The control device is utilized by three different processes at the facility and the control device is connected to one release point. See *Figure 2 – Controls Example 1* for a visual representation of this sample facility.

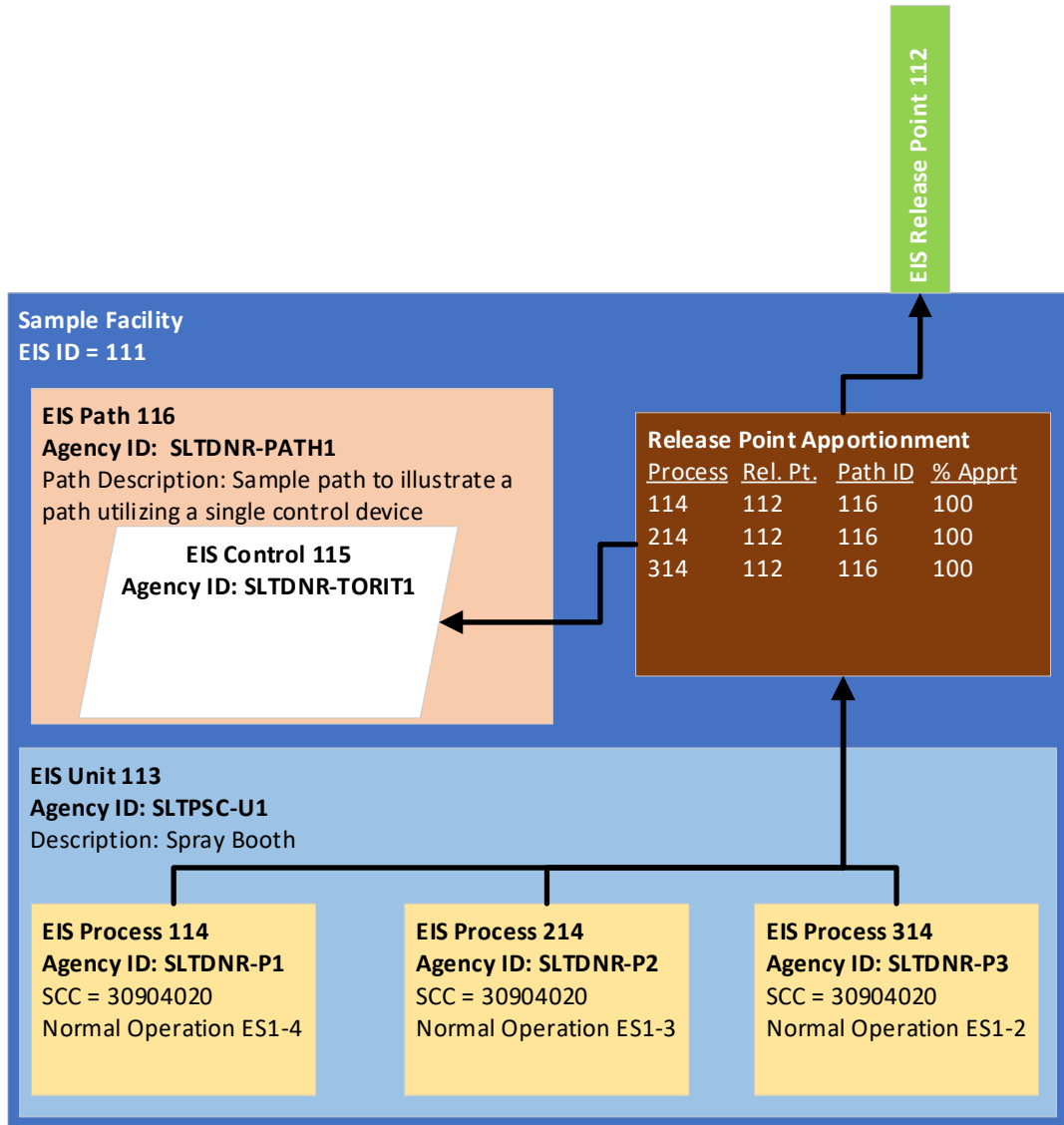


Figure 2 - Controls Example 1

EIS utilizes control paths to organize and determine how controls at the site are related to each other and how they connect to processes and release points. This is accomplished in two steps:

- 1) Defining the Control Path. This defines which controls (or possibly other path definitions) are within the path and, if there are multiple, how they related to each other within the path.

- 2) Associating the Control Path with a Release Point Apportionment record. This sets the relationship between processes and release points utilizing a given control path. Please note that the same path may be used by multiple Release Point Apportionment records.

Defining the Control Path

We will first consider defining the Control Path. For this example, we will need to create a path. It is important to remember that paths and controls are properties of the facility and can be shared by all components of the facility. For this example, the path will have the following characteristics:

- Agency Path ID: SLTDNR-PATH1
- Path Name (Required): PathExample1
- Path Description: Sample path to illustrate a path utilizing a single control device

A path may consist of one or more controls that exist at the facility, one or more paths that exist as the facility, or a combination of controls and paths that exist at the facility. For this first example, we only need to assign one control to the path.

Site Path ID	Assigned Control ID	Assigned Path ID	Sequence #	Average % Emissions Flow
SLTDNR-PATH1	SLTDNR-C1	[none]	1	100

Definitions:

Site Path ID: This is the identifier of the path which is being defined. You may reference this ID by either the agency path identifier or by the EIS path identifier.

Assigned Control ID: The identifier of the control device that exists within the path. This may be either the agency control identifier or the EIS control identifier.

Assigned Path ID: The identifier of the path that exists within the path. This may be either the agency path identifier or the EIS path identifier.

Sequence #: Defines the order in which the assigned control or path are encountered by the emissions flow from the process generating the emissions. The same sequence number may be specified multiple times within the same path definition. If a path definition has the same sequence number occurring more than once, this indicates the emissions stream has been split between multiple devices.

Average % Emissions Flow: The percentage of the emissions flow that goes through the defined control device or assigned path. For a given sequence number for a path definition, the sum of all provided “Average % Emissions Flow” values must equal 100.

Associating the Control Path with a Release Point Apportionment

Once you have a Control Path defined, you can now associate the path with a release point apportionment record using the new **ReleasePointApportionmentPathIdentification** component. That will associate a given process and release point with a control path.

Example 1 Sample XML

The way this information would be conveyed in a CERS submission is provided below. The following assumptions:

- 1) The Facility, Unit, Release Point, and processes all exist and do not need to be defined.
- 2) The controls, path, and path definitions currently do not exist at the facility and need to be defined.
- 3) The CERS header and closing XML tags are not provided in this example. This is intended to only provide examples of the new components related to control information in EIS.

Defining the Paths for the Facility

The first component to define are the site paths for the facility. Note that in the defining the path, there is a reference to the control device that has yet to be established.

```
<FacilitySite>
  <FacilityIdentification>
    <FacilitySiteIdentifier>111</FacilitySiteIdentifier>
    <ProgramSystemCode>EIS</ProgramSystemCode>
    <StateAndCountyFIPSCode>99123</StateAndCountyFIPSCode>
  </FacilityIdentification>
  <FacilitySitePath>
    <PathName>PathExample1</PathName>
    <PathDescription>Sample path to illustrate a path utilizing a single control device</PathDescription>
    <ControlPathIdentification>
      <Identifier>PATH1</Identifier>
      <ProgramSystemCode>SLTDNR</ProgramSystemCode>
    </ControlPathIdentification>
    <ControlPathDefinition>
      <SequenceNumber>1</SequenceNumber>
      <AveragePercentApportionment>100</AveragePercentApportionment>
      <ControlPathDefinitionControlIdentification>
        <Identifier>TORIT1</Identifier>
        <ProgramSystemCode>SLTDNR</ProgramSystemCode>
      </ControlPathDefinitionControlIdentification>
    </ControlPathDefinition>
  </FacilitySitePath>
```

Defining the Controls for the Facility

After the site paths have been established, you may now set up the controls for the facility.

```
<cer:FacilitySiteControl>
  <cer:ControlMeasureCode>64</cer:ControlMeasureCode>
  <cer:ControlDescription>one Torit Cartridge filter</cer:ControlDescription>
  <cer:PercentControlEffectiveness>100</cer:PercentControlEffectiveness>
  <cer:ControlStatusCode>OP</cer:ControlStatusCode>
  <cer:ControlStatusCodeYear>2008</cer:ControlStatusCodeYear>
  <cer:ControlNumberOperatingMonths>12</cer:ControlNumberOperatingMonths>
  <cer:ControlStartDate>2008-01-01</cer:ControlStartDate>
  <cer:ControlComment>Example 1 Test Control Device</cer:ControlComment>
  <cer:SiteControlIdentification>
    <cer:Identifier>TORIT1</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
```

```

</cer:SiteControlIdentification>
<cer:SiteControlPollutant>
  <cer:PollutantCode>PM25-PRI</cer:PollutantCode>
<cer:PercentControlMeasuresReductionEfficiency>99.9</cer:PercentControlMeasuresReductionEfficiency>
</cer:SiteControlPollutant>
<cer:SiteControlPollutant>
  <cer:PollutantCode>PM10-PRI</cer:PollutantCode>
<cer:PercentControlMeasuresReductionEfficiency>99.9</cer:PercentControlMeasuresReductionEfficiency>
</cer:SiteControlPollutant>
</cer:FacilitySiteControl>

```

Connect the Path to the Release Point Apportionment

```

<cer:EmissionsUnit>
  <cer:UnitIdentification>
    <cer:Identifier>U1</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:UnitIdentification>
  <cer:UnitEmissionsProcess>
    <cer:ProcessIdentification>
      <cer:Identifier>P1</cer:Identifier>
      <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
    </cer:ProcessIdentification>
    <cer:ReleasePointApportionment>
      <cer:AveragePercentEmissions>100</cer:AveragePercentEmissions>
      <cer:ReleasePointApportionmentIdentification>
        <cer:ReleasePointApportionmentIdentifier>112</cer:ReleasePointApportionmentIdentifier>
        <cer:ProgramSystemCode>EIS</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentIdentification>
      <cer:ReleasePointApportionmentPathIdentification>
        <cer:Identifier>PATH1</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentPathIdentification>
    </cer:ReleasePointApportionment>
  </cer:UnitEmissionsProcess>
</cer:EmissionsUnit>

```

This section can be repeated for the other processes (P2 and P3) that reference the exact same path. Then the closing tags for the **EmissionsUnit** and **FacilitySite** can be closed:

```

</cer:EmissionsUnit>
</cer:FacilitySite>

```

Control Path Example 2 –Controls Connected in Series

Another very common situation is for a few controls to be connected in series. That is, the entire emissions stream moves from one control device to another. For this example, we will consider a facility with a generic chemical manufacturing process (SCC = 30199998). The emissions stream goes through 3 different control devices:

- First: Thermal Oxidizer
- Second: Baghouse
- Third: Wet Scrubber

Each of these controls (along with their agency identifiers and pollutants they cover) must be defined for the facility site in a similar manner to what is described in *Example 1*. However, this example will assume that all necessary controls have been defined (along with their **ControlPollutant** and **ControlIdentification** components). We will, however, fully define the path definitions needed to describe this configuration. See “*Figure 3*” for a diagram of the facility being considered.

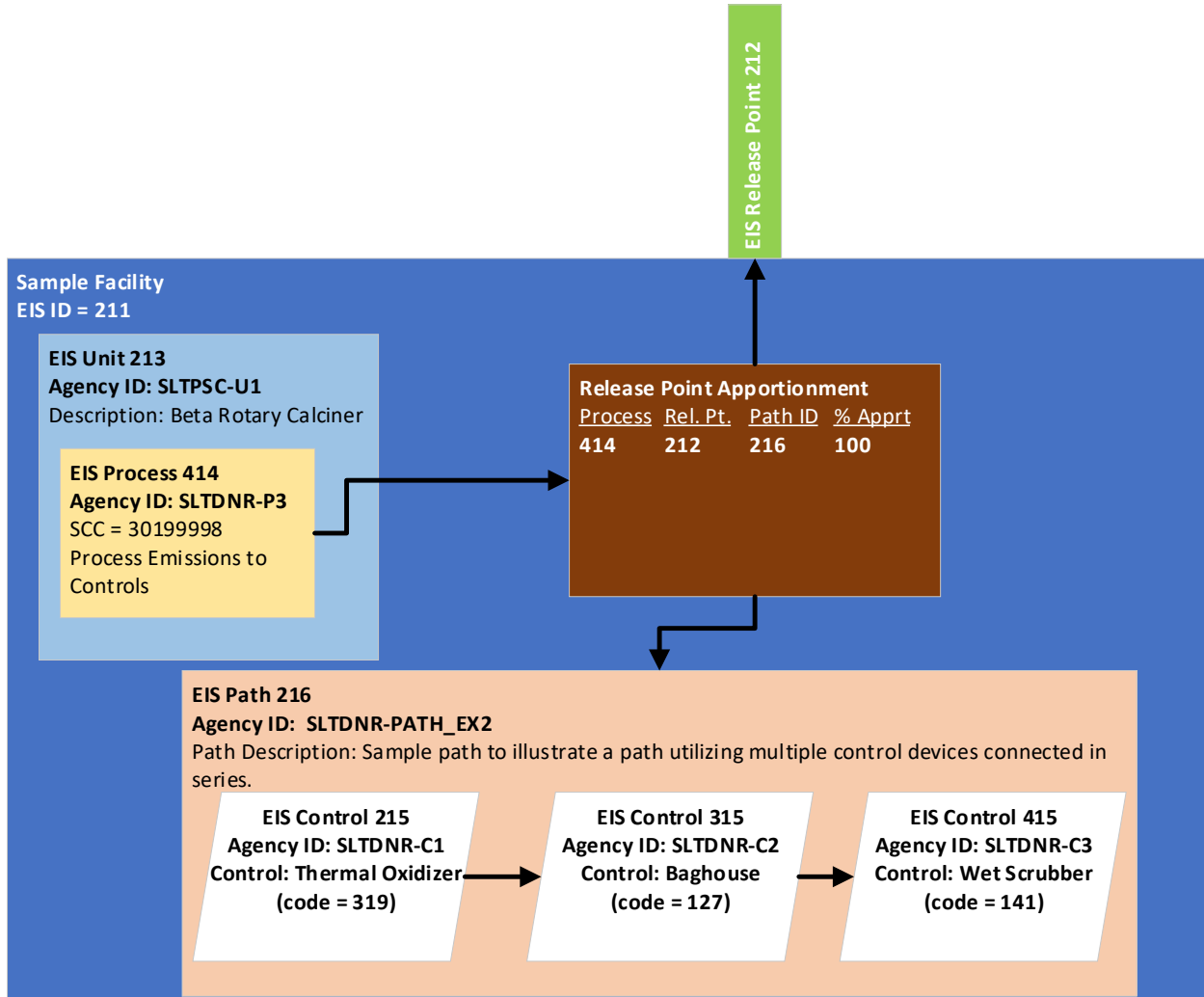


Figure 3 – Controls Example 2

The path definition for this example will consist of multiple rows. Each row will represent one of the controls in the diagram. The sequence number will reflect the order in which the control is encountered.

Site Path ID	Assigned Control ID	Assigned Path ID	Sequence #	Average % Emissions Flow
SLTDNR-PATH1	SLTDNR-C1	[none]	1	100
SLTDNR-PATH1	SLTDNR-C2	[none]	2	100
SLTDNR-PATH1	SLTDNR-C3	[none]	3	100

It should be noted that the sequence number provided does not have to be in order. You could, for example, define the sequence number as “10”, “20”, “30” instead of “1”, “2”, “3”. The only requirement is for the values to be integers appearing in numerical order.

Associating the Control Path with a Release Point Apportionment

Once you have a Control Path defined, you can now associate the path with a release point apportionment record using the new **ReleasePointApportionmentPathIdentification** component. This step is identical as in “Example 1”.

Example 2 Sample XML

In this example we assumed that the control definitions already existed for the facility for these three control devices. Please refer to “Example 1” if you have questions as to how the facility control information is defined. This is how to describe the path definitions for this example.

Defining the Paths for the Facility

After the controls have been established, you may now set up the paths for the facility.

```
<cer:FacilitySite>
  <cer:FacilityIdentification>
    <cer:FacilitySiteIdentifier>211</cer:FacilitySiteIdentifier>
    <cer:ProgramSystemCode>EIS</cer:ProgramSystemCode>
  </cer:FacilityIdentification>
  <cer:FacilitySitePath>
    <cer:PathName>PathExample2</cer:PathName>
    <cer:PathDescription>Sample path to illustrate a path utilizing multiple control devices connected in series</cer:PathDescription>
    <cer:ControlPathIdentification>
      <cer:Identifier>PATH_EX2</cer:Identifier>
      <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
    </cer:ControlPathIdentification>
    <cer:ControlPathDefinition>
      <cer:SequenceNumber>1</cer:SequenceNumber>
      <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
      <cer:ControlPathDefinitionControlIdentification>
        <cer:Identifier>C1</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ControlPathDefinitionControlIdentification>
    </cer:ControlPathDefinition>
    <cer:ControlPathDefinition>
      <cer:SequenceNumber>2</cer:SequenceNumber>
      <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
      <cer:ControlPathDefinitionControlIdentification>
        <cer:Identifier>C2</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ControlPathDefinitionControlIdentification>
    </cer:ControlPathDefinition>
    <cer:ControlPathDefinition>
      <cer:SequenceNumber>3</cer:SequenceNumber>
      <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
      <cer:ControlPathDefinitionControlIdentification>
        <cer:Identifier>C3</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ControlPathDefinitionControlIdentification>
    </cer:ControlPathDefinition>
  </cer:FacilitySitePath>
</cer:FacilitySite>
```



```
</cer:ControlPathDefinition>
</cer:FacilitySitePath>
```

Connect the Path to the Release Point Apportionment

```
<cer:EmissionsUnit>
  <cer:UnitIdentification>
    <cer:Identifier>U1</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:UnitIdentification>
  <cer:UnitEmissionsProcess>
    <cer:ProcessIdentification>
      <cer:Identifier>P3</cer:Identifier>
      <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
    </cer:ProcessIdentification>
    <cer:ReleasePointApportionment>
      <cer:AveragePercentEmissions>100</cer:AveragePercentEmissions>
      <cer:ReleasePointApportionmentIdentification>
        <cer:Identifier>212</cer:Identifier>
        <cer:ProgramSystemCode>EIS</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentIdentification>
      <cer:ReleasePointApportionmentPathIdentification>
        <cer:Identifier>PATH_EX2</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentPathIdentification>
    </cer:ReleasePointApportionment>
  </cer:UnitEmissionsProcess>
```

Then the closing tags for the **EmissionsUnit** and **FacilitySite** can be closed:

```
</cer:EmissionsUnit>
</cer:FacilitySite>
```

Control Path Example 3 –Controls Connected in Parallel

This example is to illustrate the flexibility of the new control components. In this example, there will be 5 controls that exist at a facility. However, if you example “Figure 4” you will see that the emissions stream splits and then later converges before being released. So for the portion of the time that the stream is split, the control devices are considered operating in parallel. That is, part of the total emissions stream moves through one series of control devices, and the other part of the emissions stream moves through a separate series of control devices. For this example, we will consider a facility with a wood fired boiler (SCC = 10200903). The emissions stream goes through 5 different control devices:

- First: Cyclone
- Second: The stream is split
 - 60% goes to an electrostatic precipitator
 - 40% goes to a non-catalytic reduction followed by a screen
- Third: The streams meet up again and go through a baghouse

Each of these controls (along with their agency identifiers and pollutants they cover) must be defined for the facility site in a similar manner to what is described in *Example 1*. However, this example will assume that all necessary controls have been defined (along with their **ControlPollutant** and

Control Identification components). We will, however, fully define the path definitions needed to describe this configuration. See “Figure 4” for a diagram of the facility being considered.

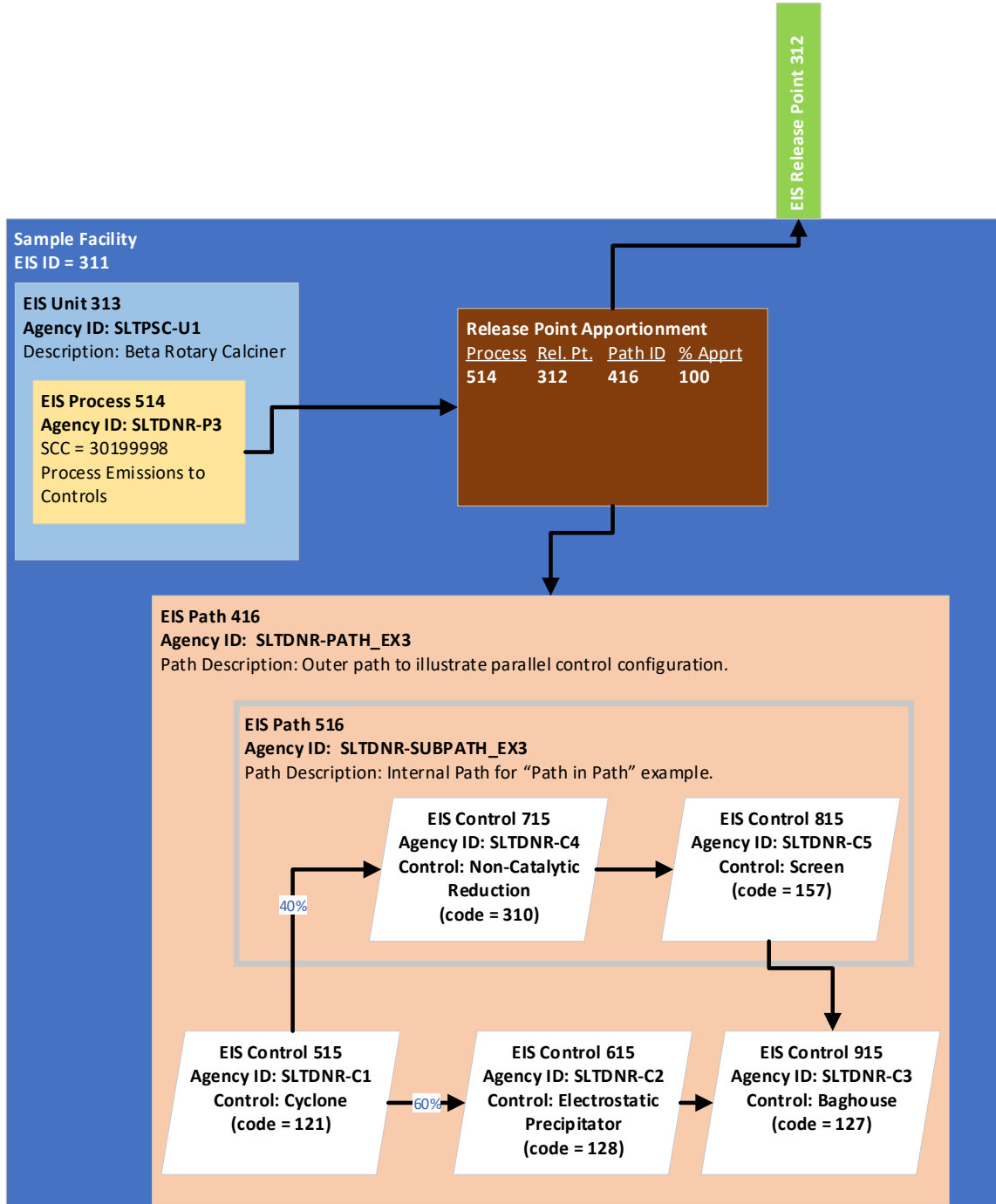


Figure 4 - Controls Example 3

One important distinction here is to notice the inner path. This is needed because of controls SLTDNR-C2 is working in parallel with both SLTDNR-C4 and SLTDNR-C5. When you define a split of the emissions stream, you can only represent the percentage of the stream that follows one route or the other. So,

the way that you represent 1 item that contains multiple controls is by defining another path (in this case path SLTDNR-SUBPATH_EX3) within the larger path (SLTDNR-PATH_EX3).

Defining the Paths for the Facility

First, create the inner path definition. Note that this looks like the Example 2 of creating a series of controls. This is exactly what we are trying to accomplish. When you have parallel configurations of controls, we need to evaluate them as a set of series of controls. Each of these sets will need to have their own path definitions.

```
<cer:FacilitySite>
  <cer:FacilityIdentification>
    <cer:FacilitySiteIdentifier>311</cer:FacilitySiteIdentifier>
    <cer:ProgramSystemCode>EIS</cer:ProgramSystemCode>
  </cer:FacilityIdentification>
  <cer:FacilitySitePath>
    <cer:PathName>SUBPATH_EX3</cer:PathName>
    <cer:PathDescription>Internal path for "Path in Path" Example</cer:PathDescription>
    <cer:ControlPathIdentification>
      <cer:Identifier> SUBPATH_EX3</cer:Identifier>
      <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
    </cer:ControlPathIdentification>
    <cer:ControlPathDefinition>
      <cer:SequenceNumber>1</cer:SequenceNumber>
      <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
      <cer:ControlPathDefinitionControlIdentification>
        <cer:Identifier>C4</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ControlPathDefinitionControlIdentification>
    </cer:ControlPathDefinition>
    <cer:ControlPathDefinition>
      <cer:SequenceNumber>2</cer:SequenceNumber>
      <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
      <cer:ControlPathDefinitionControlIdentification>
        <cer:Identifier>C5</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ControlPathDefinitionControlIdentification>
    </cer:ControlPathDefinition>
  </cer:FacilitySitePath>
```

Now create the outer path. Notice that there are 2 sequence "2" records, but their total of emissions stream percentages equals 100%. Also notice that the definition of one of these series is referencing the path we created above. In order to reference path definition within the main path, be sure the component **ControlPathDefinitionPathIdentification** is used.

```
<cer:FacilitySitePath>
  <cer:PathName>MAINPATH_EX3</cer:PathName>
  <cer:PathDescription>Outer path to illustrate parallel control configuration.</cer:PathDescription>
  <cer:ControlPathIdentification>
    <cer:Identifier>PATH_EX3</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:ControlPathIdentification>
  <cer:ControlPathDefinition>
    <cer:SequenceNumber>1</cer:SequenceNumber>
    <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
```

```

<cer:ControlPathDefinitionControlIdentification>
  <cer:Identifier>C1</cer:Identifier>
  <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
</cer:ControlPathDefinitionControlIdentification>
</cer:ControlPathDefinition>
<cer:ControlPathDefinition>
  <cer:SequenceNumber>2</cer:SequenceNumber>
  <cer:AveragePercentApportionment>60</cer:AveragePercentApportionment>
  <cer:ControlPathDefinitionControlIdentification>
    <cer:Identifier>C2</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:ControlPathDefinitionControlIdentification>
</cer:ControlPathDefinition>
<cer:ControlPathDefinition>
  <cer:SequenceNumber>2</cer:SequenceNumber>
  <cer:AveragePercentApportionment>40</cer:AveragePercentApportionment>
</cer:ControlPathDefinition>
<cer:ControlPathDefinition>
  <cer:SequenceNumber>3</cer:SequenceNumber>
  <cer:AveragePercentApportionment>100</cer:AveragePercentApportionment>
  <cer:ControlPathDefinitionControlIdentification>
    <cer:Identifier>C3</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:ControlPathDefinitionControlIdentification>
</cer:ControlPathDefinition>
</cer:FacilitySitePath>

```

Connect the Path to the Release Point Apportionment

```

<cer:EmissionsUnit>
  <cer:UnitIdentification>
    <cer:Identifier>U1</cer:Identifier>
    <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
  </cer:UnitIdentification>
  <cer:UnitEmissionsProcess>
    <cer:ProcessIdentification>
      <cer:Identifier>P3</cer:Identifier>
      <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
    </cer:ProcessIdentification>
    <cer:ReleasePointApportionment>
      <cer:AveragePercentEmissions>100</cer:AveragePercentEmissions>
      <cer:ReleasePointApportionmentIdentification>
        <cer:Identifier>112</cer:Identifier>
        <cer:ProgramSystemCode>EIS</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentIdentification>
      <cer:ReleasePointApportionmentPathIdentification>
        <cer:Identifier> PATH_EX3</cer:Identifier>
        <cer:ProgramSystemCode>SLTDNR</cer:ProgramSystemCode>
      </cer:ReleasePointApportionmentPathIdentification>
    </cer:ReleasePointApportionment>
  </cer:UnitEmissionsProcess>
</cer:EmissionsUnit>
</cer:FacilitySite>

```

Summary of Controls

The intent of the changes made to the control information were to provide a method to fully describe how the controls interacted with each other to provide a more complete picture of how the facility

operates. These modules also provide the ability to define one time for a facility and then reference these components by any number of emissions processes (through the **ReleasePointApportionment** component). Having identifiers on each of the components also allow for more targeted changes to the definitions and descriptions of the components.

The overall pollutant reduction percentages for the entirety of the control path can still be specified through the **ControlPathControlPollutant** component. This component is intended to replace the existing “ControlApproach” → “ControlPollutant” component for facility inventories. The overall percent effectiveness across the entire path may be reported through the **FacilitySitePath** component.

Point Emissions

All currently existing components and elements have not changed from CERS Version 1.2. We have added one additional component called the “**DeleteReportingPeriod**” component. This component will **remove** the entire reporting period identified within the process. This includes all emissions, supplemental calculation parameters, and operating details associated with the emissions. If specific emissions records need to be deleted, the historical practice of performing the emissions “complete replacement” philosophy will continue. For example, if emissions for 5 pollutants were originally supplied, but one of these emissions records were submitted in error, you must resubmit all the information you want retained for the 4 remaining pollutant emission records. The DeleteReportingPeriod component will remove **ALL** emissions for the specified reporting period record.

As shown in *Figure 5 – CERS Components for Point Emissions*, the **DeleteReportingPeriod** component is referenced within an emissions process. This provides a lot of control for identifying emissions data to delete. The only elements present for this component are attributes that define a unique reporting period:

- ReportingPeriodTypeCode
- EmissionOperatingTypeCode

The only other change to the Point Emissions submission is the number of decimal places allowed to be reported for supplemental calculation parameter values. It has been increased to 5 decimal positions. This will allow for the reporting of low sulfur values. Again, the name of the elements and their relative position for this data have not changed.

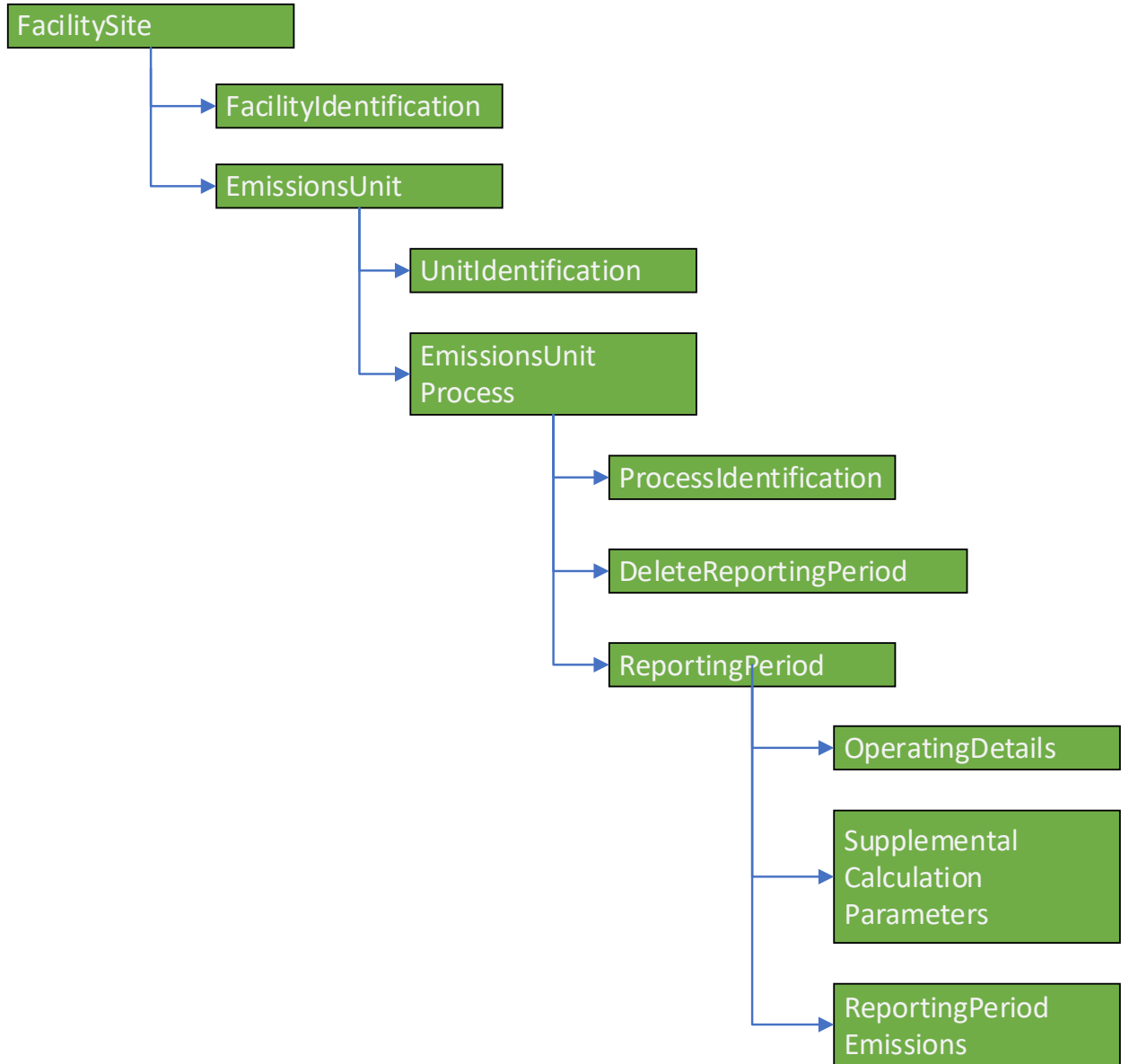


Figure 5 – CERS Components for Point Emissions

Non-Point, On-Road, and Non-Road Emissions

As with the Point Emissions, the only addition for the reporting of Non-Point, On-Road, and Non-Road emissions values is the ability to report the component DeleteReportingPeriod. This component will **remove** the entire reporting period identified within the process. This includes all emissions, supplemental calculation parameters, and operating details associated with the emissions. If specific emissions records need to be deleted, the historical practice of performing the emissions “complete replacement” philosophy will continue. For example, if emissions for 5 pollutants were originally supplied, but one of these emissions records were submitted in error, you must resubmit all the information you want retained for the 4 remaining pollutant emission records. The DeleteReportingPeriod component will remove **ALL** emissions.

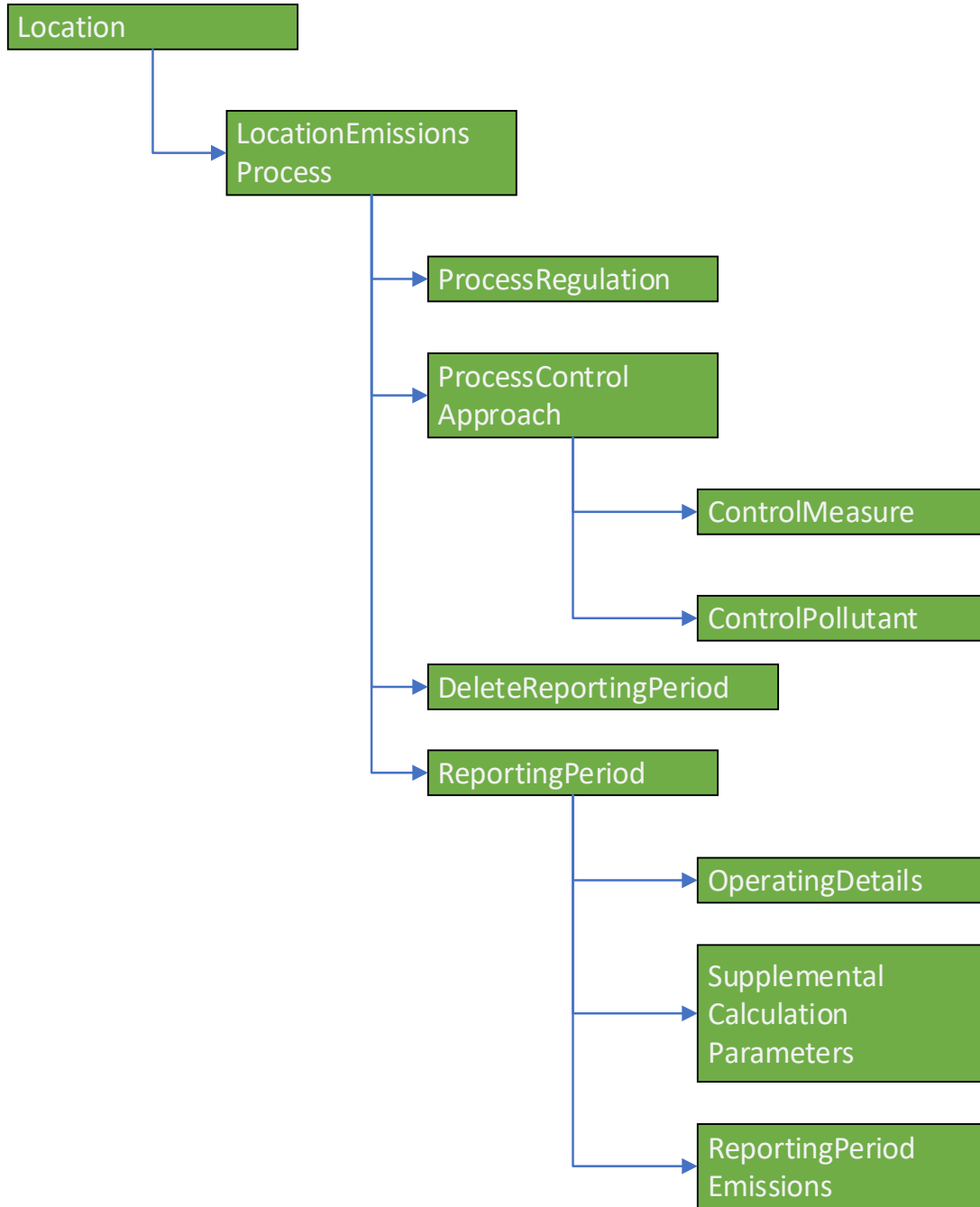


Figure 6 - CERS Components for Non-Point, On-Road, Non-Road Emissions

As shown in Figure 6 – CERS Components for Non-Point, On-Road, Non-Road Emissions, the DeleteReportingPeriod component is referenced within an emissions process. This provides a lot of control for identifying emissions data to delete. The only elements present for this component are attributes that define a unique reporting period:

- ReportingPeriodTypeCode
- EmissionOperatingTypeCode

Next Steps

The new schema is being reviewed by the Exchange Network to ensure that it meets all naming conventions and other schema requirements. Once this review has been completed, we will make the schema available for you to begin testing.

In parallel with the review effort, we will be updating the EIS Bridge Tool to accommodate these changes. We will make the new version of the Bridge Tool available as soon as practical. We are also implementing these changes within EIS. Our target date for completing the schema changes within our test environment is by the end of August 2020. We will not implement these changes into production until the end of the 2019 data submission period has ended.

Additional documentation will be made available as our development progresses describing all data validations for all data components as well as new system features (new reports, forms, and capabilities).

Appendix A –CERS Attribute List

This section shows the order of the columns (existing and new) as they will appear in the new CERS Schema. The components are listed alphabetically. The attributes within the components are listed in the order expected by the schema definition.

Other notes:

- Point and Non-Point Emissions
 - Only Changed item: The SupplementalCalculationParameterValue of the SupplementalCalculationParameter component will be defined as a 5.5 float value allowing for a minimum value of 0.00001 (for ultra-low sulfur).
 - New Component: DeleteReportingPeriod. This will remove all emissions values and the reporting period record for a given process. This replaces the need to report a “0” for a pollutant the process does not collect in order to remove all previously submitted data for the process – year. Please note this will remove all emissions records for all pollutants, all supplemental calculation parameters, and all other activity information associated with the specified reporting period.

AffiliationOrganization Component

Data Element Name	Notes
OrganizationFormalName	

AlternativeFacilityName Component

Data Element Name	Notes
AlternativeName	
ProgramSystemCode	
AlternativeNameTypeText	
EffectiveDate	

ControlPathControlPollutant Component

See “ControlPollutant Component”

ControlPathDefinition Component (New Component)

Attribute	Notes
SequenceNumber	New item - An integer defining the order in which the given path or control device is encountered by the stream. Records with the same sequence number within the same path definition indicates that the devices are operating in parallel.
AveragePercentApportionment	New item. The average percent of flow that is vented through a control device (or control path). Within a given control path definition for the same sequence number, the sum of all AveragePercentApportionment values must equal 100. A value of something other than 100% indicates that the stream splits to 2 or more devices and/or paths. EIS will retain 2 decimal positions of precision (truncated after the 2 nd decimal position)
ControlPathDefinitionControl Identification Component	New item
ControlPathDefinitionPath Identification Component	New item

ControlPathDefinitionControlIdentification Component (New Component)

See “Identification Component”

ControlPathDefinitionPathIdentification Component (New Component)

See “Identification Component”

ControlPathIdentification Component (New Component)

See “Identification Component”

ControlPollutant Component

Data Element Name	Notes
PollutantCode	
PercentControlReductionEfficiency	The percent reduction achieved for the pollutant when control device(s) are operating as designed. Please note there is no accounting for effectiveness or capture efficiency when determining this value. EIS will retain 3 decimal positions of precision (truncated after the 3 rd decimal position)

DeleteReportingPeriod Component (New Component)

Data Element Name	Notes
ReportingPeriodTypeCode	
EmissionOperatingTypeCode	

EmissionsUnit Component

Data Element Name	Notes
UnitDescription	
UnitTypeCode	
UnitDesignCapacity	
UnitDesignCapacityUnitOf MeasureCode	
UnitStatusCode	
UnitStatusCodeYear	
UnitOperationDate	
PermitStatusCode	New item - Only available to Inventory Developers
PermitStatusBeginYear	New item - Only available to Inventory Developers
PermitStatusEndYear	New item - Only available to Inventory Developers
UnitComment	
UnitIsReadOnly	New item - Only available to Inventory Developers
DesignCapacityIsReadOnly	New item - Only available to Inventory Developers
UnitIdentification Component	
UnitRegulation Component	
UnitEmissionsProcess Component	

FacilityIdentification Component

Data Element Name	Notes
FacilitySiteIdentifier	
ProgramSystemCode	
StateAndCountyFIPSCode	
TribalCode	
StateAndCountryFIPSCode	
EffectiveDate	
EndDate	
FacilityIdentifierIsReadOnly	New element - Only available to Inventory Developers

FacilityNAICS Component

Data Element Name	Notes
NAICSCode	
NAICSType	Element now to be used by EIS. Must have 1 "Primary" type. May have any number of other NAICS Indicator Codes ("SECONDARY", "TERTIARY")

FacilitySite Component

Data Element Name	Notes
FacilityCategoryCode	
FacilitySiteName	
FacilitySiteDescription	
FacilitySourceTypeCode	New element - Only available to Inventory Developers
FacilitySiteStatusCode	
FacilitySiteStatusCodeYear	
HAPFacilityCategoryCode	New element - Only available to Inventory Developers
CoordinateTolerance	New element - Only available to Inventory Developers
FacilitySiteComment	
FacilityNameIsReadOnly	New element - Only available to Inventory Developers
LocationIsReadOnly	New element - Only available to Inventory Developers
PrimaryNAICSIsReadOnly	New element - Only available to Inventory Developers
FacilityNAICS Component	
FacilityIdentification Component	
AlternativeFacilityName Component	
FacilitySiteAddress Component	
FacilitySiteGeographic Coordinates Component	
FacilitySiteAffiliation Component	
FacilitySitePath Component	New Component
FacilitySiteControl Component	New Component
EmissionsUnit Component	
ReleasePoint Component	

FacilitySiteAddress Component

Data Element Name	Notes
LocationAddressText	
SupplementalLocationText	
LocalityName	

LocationAddressStateCode	
LocationAddressPostalCode	
LocationAddressCountryCode	
AddressComment	
LocationAddressesIsReadOnly	New element - Only available to Inventory Developers
LocalitiesIsReadOnly	New element - Only available to Inventory Developers
PostalCodesIsReadOnly	New element - Only available to Inventory Developers

FacilitySiteAffiliation Component

Data Element Name	Notes
AffiliationTypeCode	
AffiliationOrganization Component	

FacilitySiteControl Component (New Component)

Data Element Name	Notes
ControlMeasureCode	New Item
ControlDescription	New Item
PercentControlEffectiveness	New Item - An estimate of the portion of the reporting period's activity for which the control device was operating as designed (regardless of whether the control measure is due to rule or voluntary). EIS will retain 3 decimal positions of precision (truncated after the 3 rd decimal position)
ControlUpgradeDate	New Item
ControlUpgradeDescription	New Item
ControlStatusCode	New Item
ControlStatusCodeYear	New Item
ControlNumberOperatingMonths	New Item
ControlStartDate	New Item
ControlEndDate	New Item
ControlComment	New Item
ControlsIsReadOnly	New Item - Only available to Inventory Developers
SiteControlIdentification Component	New Item
SiteControlPollutant Component	New Item

FacilitySiteGeographicCoordinates

See "GeographicCoordinate Component"

FacilitySitePath Component (New Component)

Attributes	Notes
PathName	New Item
PercentPathEffectiveness	New Item - An estimate of the portion of the reporting period's activity for which the control device(s) were operating as

Attributes	Notes
	designed (regardless of whether the control measure is due to rule or voluntary). EIS will retain 3 decimal positions of precision (truncated after the 3 rd decimal position)
PathDescription	New Item
PathsReadOnly	New Item - May only be populated by Inventory Developers.
ControlPathIdentification Component	New Item
ControlPathDefinition Component	New Item
ControlPathControlPollutant Component	New Item

GeographicCoordinate Component

Data Element Name	Notes
LatitudeMeasure	
LongitudeMeasure	
MidPoint2LatitudeMeasure	New Element – Only valid for Release Point Coordinates and only for release point types of “2-Dimensional Fugitive”
MidPoint2LongitudeMeasure	New Element – Only valid for Release Point Coordinates and only for release point types of “2-Dimensional Fugitive”
SourceMapScaleNumber	
HorizontalAccuracyMeasure	
HorizontalAccuracyUnitOfMeasure	
HorizontalCollectionMethodCode	
HorizontalReferenceDatumCode	
GeographicReferecePointCode	
DataCollectionDate	
GeographicComment	
VerticalMeasure	
VerticalUnitOfMeasureCode	
VerticalCollectionMethodCode	
VerticalReferenceDatumCode	
VerificationMethodCode	
CoordinateDataSourceCode	
GeometricTypeCode	
AreaWitinPerimeter	Used only for Events
AreaWithinPerimeterUnitofMeasureCode	Used only for Events
GeographicCoordinatesReadOnly	New element - Only available to Inventory Developers
FacilityIdentification Component	

Identification Component

Attribute	Notes
Identifier	New item

Attribute	Notes
ProgramSystemCode	New item
EffectiveDate	New item
EndDate	New item
IdentifierIsReadOnly	New item - May only be populated by Inventory Developers.

ProcessIdentification Component

See "Identification Component"

ProcessRegulation Components

See "Regulation Component"

Regulation Component

Data Element Name	Notes
RegulatoryCode	
AgencyCodeText	
RegulatoryStartYear	
RegulationComment	
RegulationIsReadOnly	New item - Only available to Inventory Developers

ReleasePoint Component

Attribute	Notes
ReleasePointTypeCode	
ReleasePointDescription	
ReleasePointStackHeightMeasure	
ReleasePointStackHeightUnitOf MeasureCode	
ReleasePointStackDiameterMeasure	
ReleasePointStackDiameterUnit OfMeasureCode	
ReleasePointFugitiveWidthMeasure	Attribute name change and position change.
ReleasePointFugitiveWidthUnitOf MeasureCode	Attribute name change and position change.
ReleasePointFugitiveLengthMeasure	Attribute name change and position change.
ReleasePointFugitiveLenghtUnit OfMeasureCode	Attribute name change and position change.
ReleasePointExitGasVelocity Measure	
ReleasePointExitGasVelocityUnitOf MesasureCode	
ReleasePointExitFlowRateMeasure	
ReleasePointExitFlowRate UnitOfMeasureCode	
ReleasePointExitGasTemperature Measure	
ReleasePointFenceLineDistance	

Attribute	Notes
Measure	
ReleasePointFenceLineDistance UnitOfMeasureCode	
ReleasePointFugitiveHeightMeasure	
ReleasePointFugitiveHeightUnitOf MeasureCode	
ReleasePointFugitiveAngleMeasure	
ReleasePointComment	
ReleasePointStatusCode	
ReleasePointStatusCodeYear	
ReleasePointIsReadOnly	New item - May only be populated by Inventory Developers.
StackHeightIsReadOnly	New item - May only be populated by Inventory Developers.
StackDiameterIsReadOnly	New item - May only be populated by Inventory Developers.
ExitGasVelocityIsReadOnly	New item - May only be populated by Inventory Developers.
ExitGasFlowRateIsReadOnly	New item - May only be populated by Inventory Developers.
ExitGasTemperatureIsReadOnly	New item - May only be populated by Inventory Developers.

ReleasePointGeographicCoordinates Component

See “GeographicCoordinate Component”

ReleasePointIdentification Component

See “Identification Component”

ReleasePointApportionment Component

Data Element Name	Notes
AveragePercentEmissions	The average annual percent of a process flow that is vented through a release point. Must sum to 100% for each process. EIS will retain 2 decimal positions of precision (truncated after the 2 nd decimal position)
ReleasePointApportionment Comment	
ReleasePointApportionmentIs Uncontrolled	New Item - Indicator as to whether the release point apportionment is uncontrolled. A value of “Y” means that the process – release point combination does not have any control devices applied to it. A value of “N” means that there are control devices that apply to this process – release point combination.
ReleasePointApportionment Identification component	
ReleasePointApportionment PathIdentification component	New Item

ReleasePointApportionmentIdentification Component

See “Identification Component”

ReleasePointApportionmentPathIdentification Component (New Component)

See “Identification Component”

SiteControlIdentification Component (New Component)

See “Identification Component”

SiteControlPollutant Component

See “ControlPollutant Component”

UnitEmissionsProcess Components

Data Element Name	Notes
SourceClassificationCode	
EmissionsTypeCode	Not used for Facility Inventory purposes. Only for Area Emissions reporting.
AircraftEngineTypeCode	
ProcessDescription	
ProcessStatusCode	New item – Replaces function of “LastInventoryYear”
ProcessStatusCodeYear	New item – Replaces function of “LastInventoryYear”
ProcessComment	
ProcessIsReadOnly	New item - Only available to Inventory Developers
ProcessIdentification Component	
ProcessRegulation Component	
ProcessControlApproach Component	Only to be used with NonPoint data submittals
DeleteReportingPeriod Component	New Component
ReportingPeriod Component	
ReleasePointApportionment Component	

UnitIdentification Component

See “Identification Component”

UnitRegulation

See “Regulation Component”