FACILITY GUIDE TO GECO
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Emissions Inventory

Regulatory Background: Reporting Requirements
Submittal of facility emissions data is required by Federal Regulation 40 CFR Part 51 – Air Emissions Reporting Requirements (AERR). The Georgia Environmental Protection Division (EPD) collects actual facility emissions data and submits it to the U.S. Environmental Protection Agency (EPA). This information is gathered under the authority of Georgia Rule 391-3-1-02(6)(b)(1). The required emissions data submitted by facilities are ammonia (NH3), carbon monoxide (CO), lead (Pb), sulfur dioxide (SO2), nitrogen oxides (NOx), VOCs (volatile organic compounds), PM2.5 (primary and filterable), PM10 (primary and filterable), and PM (condensable). Data will be collected on either a 3-year or annual cycle.

Per the regulatory requirements, Emissions Inventory (EI) data for all affected facilities is collected by the EPA on a three year cycle. Data collected every three years is often referred to as the NEI year. The threshold reporting requirements for the NEI year data are based on the following facility potential emissions:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Threshold (tons per year)</th>
<th>Atlanta Non-Attainment (tons per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOx</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>VOC</td>
<td>100</td>
<td>25</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>CO</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>Pb</td>
<td>0.5 Actual</td>
<td>0.5 Actual</td>
</tr>
<tr>
<td>PM10</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>PM2.5</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>NH3</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

The data are then used to create the National Emissions Inventory (NEI), which is available on the EPA website https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data. The data generated in 2017 are used for the NEI.
EI data collected for subsequent, or non-NEI years are based on a higher potential emissions threshold, which usually affects only major sources. These thresholds are:
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Threshold (tons per year)</th>
<th>Atlanta Non-Attainment (tons per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOx</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>VOC</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>NOx</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>CO</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>Pb</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PM10</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>PM2.5</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>NH3</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

The thresholds for a given year can also be found on the Georgia Environmental Protection Division’s (EPD) website at [https://epd.georgia.gov/air/emissions-inventory-system-eis](https://epd.georgia.gov/air/emissions-inventory-system-eis).

States are required to report **actual** point source emission data to EPA by **December 31** each year. After determining applicability based on potential emissions and location (attainment or nonattainment area), a facility is then required to report the actual emissions to EPD. EPD collects data from facilities using the Georgia Environmental Connections Online (GECO) tool. Facilities are required to have emissions data submitted by **June 30** of each year. EPD then reviews the data for accuracy by utilizing internal QA/QC procedures. The data review may include such items as emission factor checks, calculation reviews, understanding large changes in facility emissions from the previous year, and data within expected data ranges.

**NEI Data Utilization**

The data gathered by EPD and EPA is used for numerous regulatory and research related applications where data accuracy is imperative. The primary utilization is the EPA National Emissions Inventory (NEI), which is available to the public via the EPA website. The data from the NEI is used by EPA to develop rules and regulations as well as attainment/nonattainment designations for criteria pollutants. EPD also uses the data to develop Implementation Plans for attainment and maintenance of the National Ambient Air Quality Standards (NAAQS), rule development, Prevention of Significant Deterioration (PSD) permit review, and trend reports and analyses. Universities and research groups use the information to research air quality and human health effects. Private citizens and environmental groups also utilize the data to determine the sources, types, and effects of pollutants in specific areas.
Georgia Environmental Connections Online (GECO)

Obtaining an Account

Use an internet browser to go to https://geco.gaepd.org/. This is the home page for the GECO webtool. There is a registration button on the top-right hand side of page labeled register. Click this and follow the prompts to register.

Access to your facility

Once you are registered, you can request access to a facility. Login into the GECO system. On the home page under the facility access tab, you will find a list of facilities you have access to. Under the list is a hyper link allowing you to request facility access. Click the link and follow the prompts.
Entering Facility Inventory Data

NOTE: it is strongly recommended that the facility verify all pre-populated data for accuracy each year!

What is Facility Inventory Data?
The Facility Inventory changes very little from year to year and is in two parts:

Physical assets of the Facility
- Site-level information and location
- Emissions Units
- Release Points - Two types
  - Stacks - single emission release point site
  - Fugitives- release point area (e.g. tank or conveyors)

Operational Assets of the Facility
- Processes
- Control Approaches

Brand New Facility Information
Log into GECO and click on your facility. This will take you to a new page where you can select Emissions Fees or Emissions Inventory; you will click Emissions Inventory. This will take you to the facilities home page. The links on the left side of the page under the heading Facility Inventory is where you will click to enter your facility information. Click each link and fill out the requested information.
Facility & Contact Info

Click on the first link under Facility Inventory. This will take you to the page where you will enter your basic facility and contact information. This information should be reviewed every year to make sure it is still accurate. Most changes can be made directly in the GECO, however to change latitude/longitude site location information you will need to email GA EPD (stacy.allman@dnr.ga.gov or jing.wang@dnr.ga.gov) and request permission. EPD will need to verify the new coordinates and send them to EPA for approval. Changes to the Latitude and Longitude data without EPA approval will cause errors when EI data is submitted to EPA.

Click the Edit all info button to access text boxes to enter your information. Click Save once finished.

Release Points

On the left hand menu click the release point link. This will take you to the release point page. The release point IDs should be the same as in your air permit with EPD. You will need to list both fugitive and stack release points. To add release points, click the add button on the right hand side of the page.
When you click the “add” button, you will be prompted to enter the ID and a description. Once entered, you will be requested to enter location data for this release point. Enter all data and click “save”. Repeat this step as many times as needed to list all release points for your facility.

**Emissions Units**

On the left hand menu, click the emissions unit link. This will take you to the emissions unit page where you will add your emissions units. The emissions units IDs should match your most recent air permit with EPD. Please list all active emissions units. The add button is on the right hand side of the page.

When you click the “add” button, you will be prompted to enter the Unit ID and description. Do so, then click “save. This will take you to the details page for this unit. Enter the requested
information and click “save”. Repeat this as often as needed to list all emissions units at your facility.

*Processes*

On the left hand menu, click the Processes link. This will bring you to the process summary page. On the right side of the page is the add button. Please click this and enter the information you are prompted for. The process ID should match the process ID listed in your most recent facility permit.

When you click “add”, a pop up window will appear as below. Fill in this information and click “save”.

This will take you to the process detail page which requires an SCC code and process description. Once filled out, click ‘saves’ again.

Repeat this process as many times as needed to account for all processes at your facility.
Facility Previously Entered into the GECO System

NOTE: it is strongly recommended that the facility verify all pre-populated data for accuracy each year!

Log into GECO and click on your facility. This will take you to a new page where you can select Emissions Fees or Emissions Inventory; you will click Emissions Inventory. This will take you to the Facility and Contact information page. There you will be requested to review your data and click ‘save’. If changes need to be made to your facility’s location data (i.e., lat/long), you will need to send an email to Jing Wang (jing.wang@dnr.ga.gov) or Stacy Allman (stacy.allman@dnr.ga.gov). This field will be locked and requires EPD approval to change.

Release Points

After you have reviewed and updated your facility and contact information, you will need to enter/review the rest of your facility data. Start by clicking the release point link in the left hand menu. This will take you to the release point page that will have a list of your Stack and Fugitive release points. Review this data and add or remove the listed release points as necessary to match your permit. To remove a release point, click on the release point ID hyperlink. This will open the release point’s page; click edit. At the bottom of the edit page is the delete button. Click this to delete the point.

*Note: please review the data for each release point and verify it is still accurate. Edit each point as needed to bring it up to date.

Emissions Units

On the left hand menu, click the emissions unit link. This will take you to the emissions unit page where you will review and verify your emissions units. The page will list your active emissions units. Please verify all of your units are listed. If any are missing; please add them. To edit or remove any unit please, click the edit button for that unit. Correct any data that needs updated and click “save”, or if the unit needs to be deleted click the “delete” button.
Enter each process summary page and verify its accuracy.

Processes

On the left hand menu click the Processes link. This will bring you to the process summary page. As with release points and emissions units you will review each process ID for accuracy. Remove any process that has been shut down and add any new processes.

Entering Emission Inventory Data

What is Emission Inventory Data?

The Emission Inventory changes from year to year and consists of three basic items for each process reported in the FI portion of the inventory.

- Emission for all EI pollutants
- Operating details (Throughput)
- Supplemental calculation parameters

EPA has a list of preferred Emissions Factors that facilities should use when calculating their emissions. The list in order of preference is 1) recent stack data; 2) material balance; 3) peer reviewed emissions factors (i.e., AP-42, WebFire, NCASI, etc.; 4) engineering judgment; 5) other. You must specify the method, emissions factor, and units you have chosen. Note that for engineering judgement and other that additional supporting information will be required.

EPA required data ranges are as follows:

- Percent Control Measure Reduction Efficiency must be a value between 5 and 99.999
- Percent Capture Efficiency must be a value between 5 and 100
- Percent Effectiveness must be a value between 5 and 100
**Brand New Facility**

Log into GECO and click on your facility. This will take you to a new page where you can select Emission Fees or Emission Inventory; you will click Emission Inventory. This will take you to the facilities home page. The emission inventory menu is on the left hand side of the screen in the menu bar.

**Emissions Reporting**

Click Emissions Reporting and it will take you to the emissions reporting period summary page.

1. Tells you the reporting period
2. Check the processes to make sure all needed process are included
3. Remove any processes that should not be in this reporting period

**Process Bulk Entry**

Make sure to use actual throughput numbers in this form. Please check your units, and if they need to be changed, go back to the process in the FI and change the units.
Pollutant Bulk Entry

Fill out the form and make sure to click the update changes button.

Facility Previously Entered into the GECO System

Log into GECO and click on your facility. This will take you to a new page where you can select Emission Fees or Emission Inventory; you will click Emission Inventory. This will take you to the facilities home page. The emission inventory menu is on the left hand side of the screen in the menu bar.
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**Pollutant Bulk Entry**

Fill out the form and make sure to click the update changes button.
Facility Inventory Terms/Help

Facility & Contact Information

Facility Name and Physical Address
The Facility Name and Facility Address information should be the name and address under which the facility is currently permitted. To verify this information, you can proceed to the Facility Summary tab on the GECO Facility Home page and verify the facility information. If the GECO Facility Summary information is correct, then please contact the ECSU at 404-363-7000, and that information can be changed.

If the Facility Summary information is incorrect, then you may need to complete the Name/Ownership Change document and follow the instructions provided in the document.

Facility Mailing Address
The Facility Mailing Address should be the address where facility information should be delivered by mail. This may be different from the Facility Physical Address and even different from the Emissions Inventory Contact. All Emissions Inventory correspondence will be sent to the Emissions Inventory Contact.

Facility Description
The Facility Description should be a brief depiction of the facility operations, e.g. Power Plant; Car Manufacturing.

Description: Brief comment on the operation of your facility. The field is limited to 100 characters.

Operating Status: The facility status (for purposes of the EI only) is no longer editable on this form. The facility status may be changed in the Emissions Inventory System only when beginning the EI process. It can be changed on the Facility Operational Status form that is available only during the applicability determination part of the EI process each year. That form is not accessible after that point. To access the form after this point it is necessary to reset the EI and start over.

If a facility operated during the calendar year for which data is being collected (EI Year), but is shutdown at the time the data is being provided, the facility will still participate in the EI process for the EI year if their emissions were over the threshold(s) for that EI Year.

Operating – the facility operated all or part of the calendar year.

Temporarily Shutdown – the facility did not operate at all during the calendar year, but may restart at sometime in the future.
Permanently Shutdown – the facility has been permanently shut down and will no longer operate. Please note that if the facility operated at any time during the relevant emissions inventory reporting (calendar) year, its status should not be changed to “Permanently shutdown” until the following year.

NAICS Code: The North American Industry Classification System codes are used by the EIS to provide an industrial classification. An NAICS tool is provided to search the NAICS list or you can use the NAICS website, https://www.naics.com/search/. See https://www.census.gov/eos/www/naics/ for valid NAICS values and conversion tables from NAICS to SIC and from SIC to NAICS.

Facility Geographic Coordinate Information
The Facility Geographic Coordinate Information is reported for the location of the center of the production area. Additional to the latitude and longitude, three Method Accuracy Description (MAD) codes are requested when submitting latitudes and longitudes.

To assist the facilities with submitting this information, a mapping tool has been provided that will allow the selection of any latitude and longitude for the facility. If the mapping tool is used, the latitude and longitude will be transferred to the form as well as all the three MAD code data.

Horizontal Collection Method: Describes the method used to determine the latitude and longitude for a point on earth. Choose the method from the dropdown list on the form. If a website is used, select the geographic coordinate determination method based on address matching-other.

Accuracy Measure: The measure of accuracy of the latitude and longitude coordinates in meters. If a website is used, enter 25 meters.

Horizontal Datum Reference Code: The code that represents the reference datum used to determine the latitude and longitude coordinates. If a website is used, enter North American Datum of 1983.

Emissions Inventory Contact Information
Indicate on this form the person responsible for conducting the Emission Inventory at the facility. This could be an employee at your facility or the name of a consultant acting on behalf of the facility. If there are any problems with the submitted data, this is the individual that will be contacted. Additionally, any mail outs will be sent this individual.

The company name, mailing address, and phone numbers should be for the contact listed on this form, i.e. if the contact is the facility consultant, then please indicate the consulting firm's name, mailing address and phone numbers and not that of the facility.
Release Points

The Emission Inventory System (EIS) separates Release Points into two categories, (1) Stacks and (2) Fugitives. Each category has its own set of required information and as such there are two distinct editing areas in the EIS application. Each release point category has a set of release point details and geographical information that is required to be submitted.

Additionally, release points are used in the Process Release Point Apportionment to define the quantity of pollutants coming from the release point for that process. Note that if only one release point is left in the release point apportionment for a process, that apportionment cannot be deleted unless another release point is added or the process itself is deleted.

Stack/Fugitive ID: Unique identifier that the facility provides to identify the release point in the system. This is limited to 6 characters.

Stack/Fugitive Descriptions: Describes the point or area at which emissions are released into the environment, via a stack of fugitive release. A release point can define the area over which fugitive emissions occur.

Stack/Fugitive Operating Status: The operational status of the stack/emission release point. The possible selections are:
- Operating – this stack/fugitive release point operated all or part of the calendar year.
- Temporarily Shutdown – this stack/fugitive emission release point did not operate at all during the calendar year, but may restart at sometime in the future.
- Permanently Shutdown – select this status if a stack/emission release point has been removed, removed from service, or is permanently shutdown.

NOTE: If a release point is included in a release point apportionment its status cannot be changed to one of the shutdown modes until it is removed from all release point apportionments of which it is a part. If a release point is in a shutdown mode it may not be attached to a process or release point apportionment.

Stack/Fugitive Comments: Any additional details regarding the release point that would be beneficial.

Stack/Fugitive Add: A Release Point can be added from the summary or details pages. In order to add a release point, a release point ID and description must be provided.

Stack/Fugitive Duplicate: Release points can be duplicated from the Details pages. In order to duplicate a release point, the Release Point ID and Description must be included. Note that release point apportionment is not included in the duplication process. The only action in the duplication process is the creation of a new stack or fugitive release point with the parameters of
the copied stack or fugitive release point.

**Stack/Fugitive Delete**: A Release Point can be deleted from the Edit pages only. If a release point has been submitted to EPA or it is currently in a Release Point Apportionment, then it cannot be deleted.

**Stack Release Points**

**Stack Type**: The physical orientations of the stack release point. Types: Downward-Facing Vent, Goose Neck, Horizontal, Vertical, Vertical with Rain Cap

**Stack Height**: The height above grade of the stack in feet. An error will be experienced if stack height is less than the stack diameter.

**Stack Diameter**: Diameter of the stack in feet. For non-round stacks, the equivalent diameter equals the square root of the cross-sectional area in square feet multiplied by 1.128. For example, we need to determine the equivalent diameter for a rectangular stack exit that measures 3 feet x 2 feet. We find the area to be 6 square feet. The equivalent diameter is therefore

\[
\text{Equivalent Diameter} = 1.128 \cdot \sqrt{6} = 2.8 \text{ feet}
\]

For example, we need to determine the equivalent diameter for a rectangular stack exit that measures 3 feet x 2 feet. The cross-sectional area is 6 square feet. The equivalent diameter is

\[
\text{Equivalent Diameter} = 1.128 \cdot \sqrt{6} = 2.8 \text{ feet}
\]

NOTE: An error will be experienced if stack diameter is greater than the stack height.

**Exit Gas Velocity**: The exit velocity of the exhaust stream in feet per second (fps)

**Exit Gas Flow Rate**: Numeric value of the stack exit gas flow rate is in actual cubic feet per second (acfs). Two checks are performed on the number to make sure it is within the following ranges:

1. The reported value must be within 5% of the calculated value using the diameter and exit gas velocity entered.
2. The Exit Gas Flow Rate also must be between 0.1 and 200,000 ACFS.

"Calculated exit gas flow rate" means the value calculated using the following formula (D = diameter; v = exit gas velocity):

\[
\frac{\pi D^2 v}{4}
\]

See below for the list of ranges for stack parameters.

**Fence Line Distance**: The measure of the horizontal distance in feet to the nearest fence line of a property within which the stack is located. (OPTIONAL)
Stack Parameter Ranges

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Ranges and other Restrictions</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack Height</td>
<td>1 - 1.0 to 1300</td>
<td>feet</td>
</tr>
<tr>
<td>Stack Diameter</td>
<td>1 - 0.1 to 100 2 - must be less than height</td>
<td>feet</td>
</tr>
<tr>
<td>Exit Gas Velocity</td>
<td>0.1 to 600</td>
<td>fps</td>
</tr>
<tr>
<td>Exit Gas Flow Rate</td>
<td>1 - 0.1 to 200000 2 - must also be ±5% of calculation using diameter and exit gas velocity; if calculated value is small enough both upper and lower limits can be the same value due to requirement for rounding to one decimal place. i.e. 0.168 acfs and 0.187 acfs are both 0.2 acfs after rounding.</td>
<td>acfs</td>
</tr>
<tr>
<td>Exit Gas Temperature</td>
<td>must be -30 to 3500</td>
<td>°F</td>
</tr>
<tr>
<td>Fence line Distance</td>
<td>Optional, but if entered must be 1 to 99999</td>
<td>feet</td>
</tr>
</tbody>
</table>

Fugitive Release Points
Fugitive Release Points refers to an emission release point for emissions not routed through a stack (i.e. stacks, stock piles, conveyors). The majority of the information requested for fugitive release points are optional.

Fence Line Distance: The measure of the horizontal distance in feet to the nearest fence line of a property within which the stack is located. (OPTIONAL)

Fugitive Height Measure: The height above the terrain of the fugitive emissions in feet. (OPTIONAL)

Fugitive Width Measure: The width of the fugitive release in the East-West direction in feet as if the angle is zero degrees. (OPTIONAL)

Fugitive Length Measure: The length of the fugitive release in the North-South direction in feet as if the angle is zero degrees. (OPTIONAL)

Fugitive Angle Measure: The orientation angle for the area in degrees from North, measured positive in the clockwise direction. (OPTIONAL)

Release Point Geographic Coordinate Information
The Release Point Geographic Coordinate Information is reported for the location of the stack or the center of the fugitive source. Additional to the latitude and longitude, three Method Accuracy Description (MAD) codes are requested when submitting latitudes and longitudes.

To assist the facilities with submitting this information, a mapping tool has been provided that will allow the selection of any latitude and longitude for the facility. If the mapping tool is used,
the latitude and longitude will be transferred to the form as well as all the three MAD code data.

**Horizontal Collection Method:** Describes the method used to determine the latitude and longitude for a point on earth. Choose the method from the dropdown list on the form. If a website is used, select the **geographic coordinate determination method based on address matching-other**.

**Accuracy Measure:** The measure of accuracy of the latitude and longitude coordinates in meters. If a website is used, enter **25 meters**.

**Horizontal Datum Reference Code:** The code that represents the reference datum used to determine the latitude and longitude coordinates.

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**Emissions Units**

The Emission Unit forms allow the user to create, modify, and delete any emission units and emission unit control approaches from the facility inventory. An emission unit is a required piece of information for any facility inventory process.

**Emission Unit ID:** Unique code for the point of generation of emissions, typically a physical piece of equipment. This can be a maximum of 6 characters made up of letters and numbers (A-Z, a-z, 0-9). If an emission unit is loaded into the form, and a new Emission Unit ID is entered and saved, a new emission unit will be created in the emission inventory for the facility. If the Emission Unit ID is changed to an existing Emission Unit ID, then the data in the form will save over the previous data.

**Emission Unit Description:** Brief description of the emission unit. The description is limited to 100 characters.

**Unit Type:** A description that uniquely identifies the emission unit. This is a new field and all emissions units migrated from past inventories were assigned a value of 'Unclassified'. A warning will be given during submittal to update this information if Unclassified is selected.

**Operating Status:** The operational status of the emission unit. The possible selections are:

- **Operating** – this emission unit operated all or part of the calendar year (Active at any time during the year).
- **Temporarily Shutdown** – this emission unit did not operate at all during the calendar year, but may restart at sometime in the future (no emissions during the calendar year; Idle for the entire year).
- **Permanently Shutdown** – select this status if an emission unit has been removed, removed from service, or is permanently shutdown (no emissions during the calendar year).

**Note:** when an emission unit's status is changed to a shutdown state its processes will be removed from the current reporting period and its processes will not be available to add to the
reporting period. Changes to its processes will not be allowed and processes cannot be added to the emission unit.

**Date Unit Placed in Operation**: The date on which unit activity became operational. This was intentionally left blank on all emission units migrated from a past emissions inventory.

**Emission Unit Comments**: Comments relating to this emission unit, such as an explanation for a change in emissions or a like-kind replacement.

**Emission Unit Control Approach**: An emission unit control approach applies to the emission unit and all processes associated with that emission unit. When an Emission Unit Control Approach is added no Process Control Approach can be added for any of the processes. In other words, if one adds an Emission Unit Control Approach for an emission unit then one cannot add a Process Control Approach for any process associated with that emission unit. Also, if one adds a Process Control Approach for a process then one cannot add an Emission Unit Control Approach for the emission unit associated with that process. For more information on *Control Approach* see the section below.

**Processes Table**: List of processes that the emission unit is included. Selecting the process description will take you to the Process Details.

**Emission Unit Add**: Emission Units can be added from the Summary or Details pages. In order to add an emission unit, the Emission Unit ID and Description must be included.

**Emission Unit Duplicate**: Emission Units can be duplicated from the Details page. In order to duplicate an emission unit, the Emission Unit ID and Description must be included. Note that associated processes and control approaches are not included in the duplication; only the emission unit information is duplicated and the new emission unit ID and description are included.

**Emission Unit Delete**: An emission unit can only be deleted from the Edit page. If the emission unit has been submitted to EPA and has associated processes, then it cannot be deleted. Deleting an Emission Unit deletes any associated Emission Unit Control Approach, Control Measures, and Control Pollutants.

**Processes**

An Emissions Process is used to define how the emissions are generated. At the most basic, an emissions process is made up of one emission unit and one release point and a defined operations process. This operations process is defined by a Source Classification Code (SCC) which tells EPA what type of process it is. The classic example is a boiler exhausting through one stack and using only one fuel. All the emissions for this unit would be placed in this one process. If two fuels are combusted, then a second process needs to be defined.
Finally, during the Emissions Inventory, pollutants are added to the process. Only those emissions that are generated by that one process are included. So in our example with one fuel, all the emissions for the emissions unit would be provided in the single process. If a second fuel is combusted, then those emissions from the first fuel would be in the first process, and those emission generated from the second fuel would be in the second process.

**Process ID:** Unique identifier for the process. This is provided during the initial Add of the process.

**Process Description:** Brief description of the process, e.g. Natural Gas Fuel in B001. The description is limited to 100 characters.

**Source Classification Code (SCC):** The EPA Source Classification Code describes an emissions process or activity. A search tool has been provided to assist in determining an SCC for a process.

**Release Point Apportionment:** Release Point Apportionment allows multiple release points to be identified for a Process. If a facility has multiple release points for a given process, then each release point can be added to the Process and a percentage of the emissions assigned to each release point. The total apportionment for all release points must total 100%. Note that if only one release point is left in the release point apportionment for a process, that apportionment cannot be deleted unless another release point is added or the process itself is deleted.

**Process Control Approach:** Defines a control approach for the process only. If a Process Control Approach is added for a process then an Emission Unit Control Approach cannot be added for the emission unit. Process Control Approaches cannot exist for processes associated with an emission unit that has an Emission Unit Control Approach.

**Process Comment:** Comments relating to this process, such as an explanation for a change in SCC.

**Process Add:** Processes can be added from the Process Summary and Process Detail pages. In order to add a Process, a Process ID, Process Description, and Release Point must be chosen. The Release Point will automatically be added to the Release Point Apportionment with 100% of the emissions exiting through that Release Point, to edit the Release Point Apportionment, select the Edit button on the Process Details page in Release Point Apportionment section.

**Process Delete:** A Process can be deleted only from the Edit page. If a Process has been submitted to EPA or is currently in a Reporting Period, then it cannot be deleted. Deleting a
Process deletes the process and all process control approach, control measure, and control pollutant information.

**Control Approach**

A control approach in the new EIS defines the control device(s) and the pollutants controlled by those devices for either a process or an emission unit.

A control approach defined at the emission unit level applies to all processes associated with that emission unit. A control approach defined at the process level only applies to that single process. If an emission unit has a control approach, then any processes associated with that emission unit cannot have a control approach and vice versa.

A control approach is a strategy of control measures (devices) to control a single or group of pollutants. The EIS does not ask for how much each measure (device) controls a particular pollutant, just how much does the entire approach control the pollutant.

**Control Approach Parameters**

**Control Approach Description:** Brief description of the control approach.

**Percent Control Approach Capture Efficiency:** The percentage of air emission that is directed to the control equipment, or an estimate of that portion of an affected emissions stream that is collected and routed to the control measures, when the capture or collection system is operating as designed. A total enclosure or ducting would represent 100% capture.

**Percent Control Approach Capture Effectiveness:** The amount of time, expressed as a percentage, that the captured air emissions were directed to the operating control scenario, uptime. The effectiveness should reflect control equipment downtime and maintenance degradation. If the emissions stream was directed to the control scenario for 1000 hours, and the control scenario only operated for 900 hours, then the effectiveness is 90%.

**Control Measures:** Selection of different types of control equipment. Only one of each type can be selected even if there are more than one.

**Control Pollutants:** Selection of pollutants controlled by the control approach. Even if multiple measures control the same pollutant, the pollutant is only added once and the overall reduction efficiency is applied to the pollutant.

**Control Approach Reduction Efficiency:** The estimated average percent reduction achieved for the captured pollutant when all control measures are operating as designed. When operating, the control scenario receives 100 tons of pollutant and allows 25 tons to be emitted to the atmosphere. Therefore the reduction efficiency is 75% (75 tons not allowed to be emitted). Many control approaches do not have a permitted percentage to attain, therefore please use the manufacturer's specification.
Emissions Inventory Terms/Help

Reporting Period

The EIS consists of the Facility Inventory and the Emission Inventory. The Emission Inventory is the submission of process emission information for a given reporting period. For the EIS, the reporting period is always an annual submission. All emission information is associated with a Process from the Facility Inventory. A Process must be added in the Facility Inventory and added to the annual reporting period before emissions from that process can be included.

The Georgia EIS allows for the pre-population of the annual reporting period from a past submission. However, from the past different pre-population tool, the process throughput and the emission values are not pre-populated. All other reporting period information is pre-populated.

There are two bulk entry tools for the reporting period information. The Process Bulk Entry allows for the entry of the annual process throughput for multiple processes. The Pollutant Bulk Entry allows for the entry of annual pollutant values for multiple processes. On the Bulk Entry pages, a previous year value is shown next to the current year value in the entry table.

Emission Reporting
The Emission Reporting page lists all the Processes in the Facility Inventory in two distinct tables.

Processes NOT in the Annual Reporting Period: Lists those Processes that are currently not in the current Reporting Period. Clicking the Add button in this table for a Process places that Process in the Reporting Period and you are taken to the Edit Process Operating Details page to begin adding details. The Prepopulate button will place the Process and its underlying emissions from the last year that process was included in the EI into the current EI Reporting Period. After clicking Prepopulate the Process will appear in the table "Processes in the Annual Reporting Period." One may click on the process in that table to make any changes. The Prepopulate button is not active for any processes that have never been included in an EI reporting period.

Processes in the Annual Reporting Period: Lists those Processes that are already in the Reporting Period from the pre-population or that have already been added. You may remove a Process from the current Reporting Period by choosing the Process, going to the Emission Inventory Details page then clicking the Edit button for the Process Operating Details and, lastly, clicking the Delete button on the Edit Process Operating Details page.

Process Operating Details

The Process Operating Details consist of the following:
- Process Operating Details
- Daily, Weekly & Annual Information
- Seasonal Operation Percentages
- Fuel Burning Information (if needed)

**Delete Process Operating Details:** This Delete removes the entire Reporting Period Process and Emissions from the reporting period. All Process Operating Details; Daily, Weekly, & Annual Information; Seasonal Operation Percentages; Fuel Burning Information; and Emission Details.

**Process Operating Details**

- **Calculation Parameter Type:** Selects the type of process information the annual throughput represents. The three possible choices are *Input*, *Output*, or *Existing*. All information that was migrated from the old emission inventory was given a value of *Existing*.

- **Actual Annual Throughput/Activity:** The quantity of throughput/activity for the process in units per year. This value can also be entered on the Process Bulk Entry pages.

- **Annual Throughput/Activity Units:** Describes the process annual throughput number based on the options available.

**Material Processed or Fuel Used:** Select the best product or fuel description from the drop-down list that best represents the process material input/output or fuel consumed.

**Daily, Weekly, Annual Information**

- **Average Hours per Day:** Typical hours per day that the emitting process operates during the inventory period.

- **Average Days Per Week:** Typical days per week that the emitting process operates during the inventory period.

- **Average Weeks Per Year:** Typical weeks per year that the emitting process operates during the inventory period.

- **Actual Hours Per Year:** Represents the total actual hours the process operated during the calendar year for which the emissions inventory is being submitted.

**Seasonal Operational Percentages**

The fraction of the total operation that occurs in each season. This expresses the part of the actual annual activity information based on the four seasons (e.g., production in summer is 40%, i.e. 40% of the year’s production). The total Seasonal Operation shall equal 1.00, i.e., 100%.

- **Winter** —The percentage of the total annual activity that a process operates during the Winter months (December, January, February, all from the same reporting year, i.e., Winter 2010 = January 2010 + February 2008 + December 2010).

- **Spring** —The percentage of the total annual activity that a process operates during the Spring months (March, April, May).

- **Summer** —The percentage of the total annual activity that a process operates during the Summer months (June, July, August).
**Fall** — The percentage of the total annual activity that a process operates during the Fall months (September, October, November).

Fuel Burning Information
Report only if the process consumes a solid, liquid, or gaseous fuel.

**Fuel Heat Content**: The heat content of a fuel in British Thermal Units per the standard unit of measure for that type of fuel, that is:
- BTU per Standard Cubic Feet (gaseous fuels)
- BTU per Ton (solid fuels)
- BTU per Gallon of oil (liquid fuels)

NOTE: To avoid errors please use the correct value and unit combinations. "E6BTU" means "million Btu." The numerator is always million BTU (E6BTU). Choose a combination of heat content value and denominator to make the heat content value correct. For example, the heat content of natural gas is about 1000 BTU/SCF. The units cannot be entered in that form. On the form one would enter "1000 E6BTU/MILLION STANDARD CUBIC FEET," which is the same as 1000 BTU/SCF.

The following table shows examples of fuel heating values and the value and unit to be used on the form.

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Typical Heating Value (Heat Content)</th>
<th>Heat Content for Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Oil</td>
<td>145,000 Btu/gal</td>
<td>145 E6BTU/1000 Gallons <strong>OR</strong> 0.15 E6BTU/Gallon</td>
</tr>
<tr>
<td>Natural gas</td>
<td>1030 Btu/scf</td>
<td>1000 E6BTU/Million Standard Cubic Feet</td>
</tr>
<tr>
<td>Coal</td>
<td>13,000 Btu/lb</td>
<td>26 E6BTU/Ton</td>
</tr>
<tr>
<td>Wood Pellets</td>
<td>8,000 Btu/lb</td>
<td>16 E6BTU/Ton</td>
</tr>
</tbody>
</table>

**Sulfur %**: Percent Sulfur, by weight, in the process fuel. Enter sulfur percentage if the percentage is 0.01% or greater. For fuels with sulfur content below 0.01% place a checkmark in the "Negligible" checkbox. This will clear any value entered for the sulfur content and allow the operating details to be submitted without a value for sulfur content.

**Ash %**: Percent Ash, by weight, in the process fuel. Enter ash content percentage if the percentage is 0.01% or greater. For fuels with ash content below 0.01% place a checkmark in the "Negligible" checkbox. This will clear any value entered for the ash content and allow the operating details to be submitted without a value for ash content.
Emissions Reporting

The primary goal of the annual emission inventory is to obtain the amount of emissions generated by a process. This section allows for the entry of the pollutant, emission calculation method information, and the actual amount of emissions.

**Pollutant**: Name of the substance, compound or compound group of which emissions are produced.

**Emission Calculation Method**: The method used for computing or measuring emissions.

**Emission Factor**: The ratio relating emissions of a specific pollutant to an activity or material process rate. The numeric value of this field is dependent upon the calculation method and the emission factor numerator and denominator units. A pollutant-specific emission factor is typically expressed as pounds per process rate units. Uncontrolled emission factors should be reported here. Where applicable, reduce the resulting amount of emissions by the actual capture and control efficiencies of the control approach.

**Emission Factor Numerator**: Usually pounds but can be another unit, such as grams where the emission factor is grams per horsepower-hour (g/Hp-Hr).

**Emission Factor Denominator**: These units are usually the same as the process rate units. For example, for a natural gas boiler the process rate is measured in million standard cubic feet; the emission factor unit numerator would be pounds and the denominator would be million standard cubic feet (lbs/mmscf).

**Actual Emissions**: Amount of actual annual emissions of the pollutant, after application of air pollution control equipment, reported in tons per year. The actual emissions for a process—measured or calculated—that represents a calendar year. This total shall include emissions from fugitives, upsets, startups, shutdowns, malfunctions, and excess emissions.

**Summer Day Emissions (Process operated May 1 - Sep 30)**: Summer Day emissions of VOC and NOx are now being collected for facilities located in the Atlanta ozone non-attainment area. The question only appears if your facility is located in the ozone non-attainment area and NOx and/or VOC emissions are greater than 0.3 TPY. The Summer Day emissions quantity is the average daily emissions of VOC or NOx that the emission unit/process emits during the period May 1 through September 30. This period is different from the definition of Summer for a process.

The Summer Day emissions are the average daily emissions of NOx and/or VOC for the period May 1 through September 30. If a unit/process operated 7 days per week during that period and had total VOC emissions of 18 tons, the summer day emissions reported should be 18 tons divided by 153 days. That is 0.118 TPD (18/153). If the unit/process does not operate 7 days per week, the summer day emission reported should be the total emission from May 1 through September 30 divided by the number of days the unit/process operated during that period. The smallest value allowed to be entered is 0.001 TPD.
If the value entered is greater than 1/300 of the total emissions of VOC or NOx for the process the value will be saved and a warning will be shown that the value was saved, but is larger than expected.

**Emission Factor Explanation:** Any additional information regarding the emission factor.

**Delete Emissions:** Deleting emissions will remove all pollutant and emission calculation information for the selected pollutant. In order to delete all pollutants from the Emission Inventory submittal process, the entire Process Reporting period information must be deleted from the Edit Process Operating Details page using the Delete button on that page.

**Particulate Matter (PM) Reporting Errors:** The following rules must be adhered to when reporting PM emissions.
For each combination of Emission Unit and Process:

1. If PM10-FIL and PM10-PRI are submitted, PM10-PRI must be greater than or equal to PM10-FIL
2. If PM25-FIL and PM25-PRI are submitted, PM25-PRI must be greater than or equal to PM25-FIL
3. If PM-CON and PM10-PRI are submitted, PM10-PRI must be greater than or equal to PM-CON
4. If PM-CON and PM25-PRI are submitted, PM25-PRI must be greater than or equal to PM-CON
5. If PM10-FIL and PM25-FIL are submitted, PM10-FIL must be greater than or equal to PM25-FIL
6. If PM10-PRI and PM25-PRI are submitted, PM10-PRI must be greater than or equal to PM25-PRI
7. If PM10-FIL, PM-CON, and PM10-PRI are submitted, PM10-FIL + PM-CON = PM10-PRI (+/- 1 Ton)
8. If PM25-FIL, PM-CON, and PM25-PRI are submitted, PM25-FIL + PM-CON = PM25-PRI (+/- 1 Ton)

**Particulate Matter (PM) Reporting Warnings:** The following rules should be adhered to when reporting PM emissions.
For each combination of Emission Unit and Process:

1. If PM10 Primary emissions are reported then PM2.5 Primary should also be reported
2. If PM10 Filterable emissions are reported then PM2.5 Filterable should also be reported
3. If PM Condensable emissions are reported then PM2.5 Filterable and/or PM10 Filterable should also be reported
**Frequently Asked Questions**

1. Does GECO allow emissions groups/groupings for insignificant units?  
   a. The Facility information does not allow for EU groupings

2. If a facility is required to report due to just one pollutant, do they have to report all pollutants?  
   a. Yes. If any pollutant is over the threshold, all emissions must be reported.

3. Does facility contact information and pre-populated data need reviewed annually?  
   a. Yes. All facility and contact data should be reviewed annually and updated as needed.

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**Error Codes**

**List of Possible EIS Errors**

<table>
<thead>
<tr>
<th>Error ID</th>
<th>Basis for Error</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>E01</td>
<td>No Processes have been added to the Reporting Period</td>
<td>From the Reporting Period Summary page, add at least one Process to the Reporting Period</td>
</tr>
<tr>
<td>E02</td>
<td>Missing Fuel Burning Emission Unit information</td>
<td>Edit the Emission Unit and add any missing required fields</td>
</tr>
<tr>
<td>E03</td>
<td>One or more stack parameters either invalid or missing. Refers to one or more of the following: stack description, height, diameter, exit gas velocity, exit gas flow rate, exit gas temperature, fence line distance (optional but range checked if entered), and geo-location data (latitude, longitude, horizontal accuracy measure, horizontal collection method code, horizontal reference datum code).</td>
<td>Go to the Stack Edit page for each stack shown to have an error and provide or correct the required data. The Facility Inventory Help page contains details on the allowed ranges and other restrictions.</td>
</tr>
<tr>
<td>E04</td>
<td>Missing required Fugitive Release Point and Fugitive Release Point Geographical information</td>
<td>Edit the Fugitive Release Point and Geographical information and add any missing required fields</td>
</tr>
<tr>
<td>E05</td>
<td>Release Point Apportionment sum not equal 100%</td>
<td>Navigate to the Edit Release Point Apportionment page and make the necessary corrections so that the total apportionment is 100% for the process.</td>
</tr>
<tr>
<td>E06</td>
<td>Emission Unit Control Approach has no Control Measure or has no Pollutant</td>
<td>Navigate to the Edit Emission Unit Control Approach page and add control measures and any pollutants.</td>
</tr>
<tr>
<td>E06b</td>
<td>Emission Unit Control Approach data out of range</td>
<td>Navigate to the Edit Emission Unit Control Approach page and correct the data.</td>
</tr>
<tr>
<td>E06c</td>
<td>Emission Unit Control Approach Pollutant data out of range</td>
<td>Navigate to the Edit Emission Unit Control Approach page and correct the pollutant data.</td>
</tr>
<tr>
<td>E07</td>
<td>Process Control Approach has no Control Measure or has no Pollutant</td>
<td>Navigate to the Edit Process Control Approach page and add control measures and any pollutants.</td>
</tr>
<tr>
<td>E07b</td>
<td>Process Control Approach data out of range</td>
<td>Navigate to the Edit Process Control Approach page and correct the data.</td>
</tr>
<tr>
<td>E07c</td>
<td>Process Control Approach Pollutant data out of range</td>
<td>Navigate to the Edit Process Control Approach page and correct the pollutant data.</td>
</tr>
<tr>
<td>E08</td>
<td>Multiple Stack release points have the same geographic coordinates</td>
<td>Navigate to the Stack Edit page and select the geographic coordinate’s specific to that release point.</td>
</tr>
<tr>
<td>E09</td>
<td>Multiple Fugitive release points have the same geographic coordinates</td>
<td>Navigate to the Fugitive Edit page and select the geographic coordinate’s specific to that release point.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Correction</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>E10</td>
<td>Source Classification Code (SCC) is either not entered or not valid</td>
<td>Navigate to the Edit Process Details page and provide or correct the SCC.</td>
</tr>
<tr>
<td>E20</td>
<td>Emission Units operating but not in Reporting Period</td>
<td>Go to Reporting Period Summary and add processes to the Reporting Period.</td>
</tr>
<tr>
<td>E21</td>
<td>E21 - Missing Process Throughput values or Units for given Process Reporting Period Details</td>
<td>Edit the Process Reporting Period and add the Process Throughput and or Units or use the Process bulk entry tool.</td>
</tr>
<tr>
<td>E22</td>
<td>Missing the Process Calculation Parameter Type. Must indicate Input or Output.</td>
<td>On the Edit Process Operating Details page, change the Process Calculation Parameter Type to Input or Output, based on the Process Throughput.</td>
</tr>
<tr>
<td>E23</td>
<td>Missing Emissions value for a given pollutant</td>
<td>Edit the Edit Emissions Details page for the given pollutant and provide the emissions value, or use the Pollutant Bulk Entry tool.</td>
</tr>
<tr>
<td>E24</td>
<td>Emission Calculation Method or Factor needs correction.</td>
<td>If the Emission Calculation Method indicates that an Emission Factor is used, then provide the Emission Factor required fields.</td>
</tr>
<tr>
<td>E25</td>
<td>Summer Day emission quantity missing. Process operates during summer months, therefore summer day emission expected</td>
<td>Navigate to the Edit Emission Details page and provide the Summer Day emissions quantity.</td>
</tr>
<tr>
<td>E26</td>
<td>Seasonal Operating Parameters do not total 100% and/or missing operating average values</td>
<td>Edit the Edit Process Operating Details page and check required fields by saving the Process.</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Condition</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>E27a</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM10-FIL and PM10-PRI are submitted, PM10-PRI must be greater than or equal to PM10-FIL</td>
</tr>
<tr>
<td>E27b</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM25-FIL and PM25-PRI are submitted, PM25-PRI must be greater than or equal to PM25-FIL</td>
</tr>
<tr>
<td>E27c</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM-CON and PM10-PRI are submitted, PM10-PRI must be greater than or equal to PM-CON</td>
</tr>
<tr>
<td>E27d</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM-CON and PM25-PRI are submitted, PM25-PRI must be greater than or equal to PM-CON</td>
</tr>
<tr>
<td>E27e</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM10-FIL and PM25-FIL are submitted, PM10-FIL must be greater than or equal to PM25-FIL</td>
</tr>
<tr>
<td>E27f</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM10-PRI and PM25-PRI are submitted, PM10-PRI must be greater than or equal to PM25-PRI</td>
</tr>
<tr>
<td>E27g</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM10-FIL, PM-CON, and PM10-PRI are submitted, PM10-FIL + PM-CON must equal PM10-PRI (+/- 1 Ton)</td>
</tr>
<tr>
<td>E27h</td>
<td>Error(s) in Particulate Emissions values.</td>
<td>If PM25-FIL, PM-CON, and PM25-PRI are submitted, PM25-FIL + PM-CON must equal PM25-PRI (+/- 1 Ton)</td>
</tr>
<tr>
<td>E28</td>
<td>These processes are in the reporting period, but no pollutants (emissions) have been reported for them.</td>
<td></td>
</tr>
<tr>
<td>E29</td>
<td>Emission Unit Type is missing or invalid</td>
<td>Select a specific Emission Unit Type from the Edit Emission Unit</td>
</tr>
</tbody>
</table>
## List of Possible EIS Warnings

<table>
<thead>
<tr>
<th>Warning ID</th>
<th>Basis for Warning</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01</td>
<td>Emission Unit Type is set to Unclassified</td>
<td>Select a specific Emission Unit Type from the Edit Emission Unit Details page</td>
</tr>
<tr>
<td>W02</td>
<td>Optional fugitive information has not been entered</td>
<td>Edit the Fugitive Release Point and add any additional optional information.</td>
</tr>
<tr>
<td>W20a</td>
<td>Warning(s) in Particulate Emissions values</td>
<td>If PM10 Primary emissions are reported, then PM2.5 Primary emissions should be reported.</td>
</tr>
<tr>
<td>W20b</td>
<td>Warning(s) in Particulate Emissions values</td>
<td>If PM10 Filterable emissions are reported, then PM2.5 Filterable emissions should be reported.</td>
</tr>
<tr>
<td>W20c</td>
<td>Warning(s) in Particulate Emissions values</td>
<td>If PM Condensable emissions are reported, then PM10 Filterable and PM2.5 Filterable should be reported.</td>
</tr>
</tbody>
</table>