

## Chapter 6. Updating an Emissions Inventory

This chapter explains how to update an EI. Review all information in this publication before attempting to update an EI. The required method for submitting an EI is through the STEERS-AEIR Web-EI system, using either interactive Web entry or text-file upload. For information on updating an EI online through STEERS, refer to the [EAS webpage](#). Be certain to review all data in the EI for accuracy and update EI items as necessary.

### Updating Data

#### Special Notes

##### *Sample Calculations*

Under 30 TAC Subsection 101.10(c), regulated entities must submit sample calculations representative of the sources and pollutants from their site by the EI due date. Submit sample calculations showing emissions determinations for each different process type present in the EI, including enough information to reasonably reproduce the emissions reported. Please do not submit generic sample calculations since they do not contain representative process data and do not demonstrate actual emissions. Nonconfidential sample calculations and supporting documentation can be attached to the STEERS-AEIR Web-EI system, submitted by hard copy (see Appendix C, “EAS Contact Information and Other Resources” for address information), or e-mailed to [psdocument@tceq.texas.gov](mailto:psdocument@tceq.texas.gov), with the RN included in the subject line. Confidential sample calculations and supporting documentation can be submitted in hard copy with each page clearly marked as confidential, or through the TCEQ FTPS website. Please contact the EAS for assistance on submitting confidential information through the secure FTPS website.

Use the following guidelines when sending representative calculations:

- When several sources of the same type are present and a single calculation methodology was used to determine emissions, include:
  - calculations for the source with the highest emissions; and
  - actual process data for each source where sample calculations are not supplied.
- When several sources of the same type are present but different calculation methodologies were used to determine emissions, include:
  - calculations for the source with the highest emissions for each calculation methodology; and
  - actual process data for each source that uses a different calculation methodology for which sample calculations are not supplied.

Examples of actual process data include heat inputs and fuel types for combustion sources and chemical types and throughputs for storage tanks and loading sources.

## Account Information

For a detailed description of the items in this section, consult the Glossary. To make any significant changes to any of the other account information, such as RN, CN, or ownership change, complete a [Core Data Form](#)<sup>a</sup> and send it to the EAS.

## Contact Information

Contact information can be updated through the STEERS-AEIR Web-EI system. For more information, please refer to the [EAS webpage](#).

## Criteria Emissions Totals

There are four categories of emissions: *Annual*, *Ozone*, *EE*, and *SMSS*.

After the EI has been updated using the STEERS-AEIR Web-EI system, the site level criteria emission totals are automatically summed from the emissions that were reported at each path. The VOC totals only include emissions from volatile organic compounds. Emissions from nonreactive hydrocarbons such as acetone are not included in the VOC totals. NO<sub>x</sub> emissions are reported under contaminant code 70400 (nitrogen oxides). For EI purposes, the total NO<sub>x</sub> emissions include emissions reported under contaminant codes 70400 (nitrogen oxides), 70401 (nitric oxide), and 70402 (nitrogen dioxide). Emissions reported under contaminant code 70403 (nitrous oxide) are not included in the NO<sub>x</sub> totals.

For a thorough discussion of the elements of this section, please consult Chapter 4.

## Site Quantifiable Event Totals

The total number of reportable and non-reportable emissions events; reportable and non-reportable scheduled maintenance, startup, and shutdown activities; and excess opacity events are required to be reported each year per 30 TAC Sections 101.201 and 101.211. An explanation of each type of event follows.

*Reportable Emissions Events* is the total number of emissions events that resulted in unauthorized emissions equal to or in excess of the reportable quantity (RQ) for any individual air contaminant. These events should have been reported previously to TCEQ as required by 30 TAC Section 101.201.

*Non-Reportable Emissions Events* is the total number of emissions events that did not result in unauthorized emissions equal to or in excess of the RQ for any individual air contaminant.

*Reportable Scheduled Maintenance, Startup, and Shutdown Activities* is the total number of SMSS activities that resulted in unauthorized emissions equal to or in excess of the RQ for any individual air contaminant. These activities should have been reported previously to TCEQ as required by 30 TAC Section 101.211.

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<sup>a</sup> [www.tceq.texas.gov/permitting/central\\_registry/guidance.html](http://www.tceq.texas.gov/permitting/central_registry/guidance.html)

*Non-Reportable Scheduled Maintenance, Startup, and Shutdown Activities* is the total number of SMSS activities that did not result in unauthorized emissions equal to or in excess of the RQ for any individual air contaminant.

*Excess Opacity Events* is the total number of excess opacity events where the opacity readings equaled or exceeded 15 percentage points above an applicable opacity limit, averaged over a six-minute period.

Enter the total number of each type of event. Enter zero if there were no events of a particular type. Do not include events from maintenance, startup, and shutdown activities that are authorized by a permit or PBR. When authorized, these activities are considered routine operations. However, DO enter all activities where the maintenance, startup, and shutdown activities resulted in emissions that exceeded the authorized amounts.

For definitions of terms used in this section, consult the Glossary. For guidance on interpreting rules concerning EE and SMSS activities, contact the TCEQ regional office where the regulated entity is located.

## **Emissions Events Certifying Signature**

Per 30 TAC Subsection 101.10(d)(2), an owner or operator of a regulated entity that experienced no emissions events during the relevant calendar year must include, as part of the reported inventory, a statement certifying that the regulated entity experienced no emissions events during the reporting year.

The certification is also required for regulated entities that experienced one or more excess opacity events but did not experience any emissions events.

The STEERS-AEIR Web-EI system has two radio buttons for the EE certifying signature, one that states the site did not experience any emissions events during the calendar year and one that states the site did experience emissions events during the calendar year. Selecting one of the radio-button options and submitting the EI to TCEQ constitutes a legally binding electronic signature. Additional information on the EE certifying signature is available at the [EAS webpage](#).

## **Signature of Legally Responsible Party**

Per 30 TAC Subsection 101.10(d)(1), a complete inventory requires the signature of the individual responsible for certifying that the inventory is, to the best of his or her knowledge, accurate and complete.

The data in STEERS can only be submitted by a user with submit authority. By completing the submit process, the user certifies the EI data. After reviewing the data and selecting the appropriate EE Certification statement, the user will be taken to a page showing the criteria emissions totals and several legal statements regarding the certification of the EI data. Submission through the STEERS-AEIR Web-EI system serves as the certification and constitutes a legally binding electronic signature and must be certified/submitted by a company legally responsible official. Company consultants must not be given submit authority. For Title V sites, submit access must be given only

to the Responsible Official or their Duly Authorized Representation. Additional information on signing and certifying an EI is located at the [EAS webpage](#). For additional guidance regarding the definition of the legally responsible party, please consult 30 TAC Section 122.165.

Note that the legally responsible party **must not** be a consultant.

## Facility Information

Descriptions of most of the items in this section, along with information on accepted values, may be found in the Glossary. The following discussion focuses on updating facility data.

If corrections to any of the information in this section are necessary and cannot be updated through the STEERS-AEIR Web-EI system, please contact the EAS.

### Source Classification Code

A facility's SCC is an **eight-digit** EPA-developed code that associates emissions determinations with identifiable industrial processes. TCEQ uses a facility's SCC for modeling, rulemaking, and SIP-related activities; therefore, a facility's SCC must be as accurate as possible.

Point source SCCs can be found on [EPA's web page](#)<sup>1</sup>. When using this data, only use the codes that have a value of "POINT" in the "Data Category" column, as only those codes are appropriate for the point source EI. Please do not enter SIC (Standard Industrial Classification) codes or AMS (area and mobile source) codes for SCCs on the EI.

SCCs cannot be updated through the STEERS-AEIR Web-EI system; please contact the EAS to update an SCC.

### Status, Status Date

If the facility's status has changed, enter the appropriate letter and the date when the status changed. Status options are:

- **A** (active): If the facility operated for any portion of the reporting year.
- **I** (idle): If the facility was idle or temporarily shut down for the entire reporting year.
- **S** (shut down): If the facility has been permanently shut down and will never operate again. **Note that a facility, once shut down, cannot be reactivated in the STARS database.**
- **D** (demolished): If the facility has been removed from the site.

Changing a facility's status code may require contacting the EAS. Users may not be able to make updates using the STEERS-AEIR Web-EI system for the following options:

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<sup>1</sup> [sor-scc-api.epa.gov/sccwebservices/sccsearch/](http://sor-scc-api.epa.gov/sccwebservices/sccsearch/)

- **N (permitted but never built):** For more information on reporting structure for sites that are “planned” or “under construction,” contact the EAS.
- **O (ownership transferred to a new party):** If the facility has been sold, or if responsibility for it has been transferred to another owner, during the reporting year. Supply the new owner’s TCEQ air RN and the date of ownership transfer.

*Note:* The Path Deactivation Request Form should be used to unlink an active FIN from an EPN. Please provide a reason for each deactivation request. The EI form and instructions are available from the [EAS webpage](#). Path deactivations cannot be completed through the STEERS-AEIR Web-EI system.

*Example:* (FIN) TANK previously vented to the atmosphere through (EPN) TANKSTK but now only vents to (EPN) FLARE. Use this form to communicate that path (FIN) TANK / (EPN) TANKSTK needs be deactivated. The new path (FIN) TANK / (EPN) FLARE can be added using the STEERS-AEIR Web-EI system. Additional information on creating new paths is available at the [EAS webpage](#).

### ***Operating Schedule and Annual Operating Hours***

These fields must reflect a facility’s **actual** annual operating schedule and operating hours, **not** maximum potential hours of operation. Update these fields every reporting year with actual data for the facility.

If a facility’s operating schedule is inconsistent throughout the reporting year, provide the actual number of weeks that the facility operated in the “Weeks per Year,” and provide average data for the fields “Days/Week” and “Hours/Day.”

### ***Seasonal Operating Percentages***

Seasonal operating percentages represent the percentage of actual facility operations that occurs during each season. These percentages are normally based upon process rate data. For EI purposes, “spring” includes March through May; “summer” includes June through August; “fall” includes September through November; and “winter” includes January, February, and December of the same calendar year. The percentages must be reported as whole numbers (no decimals) and must sum to 100. Note that the ozone season (May through September) no longer represents the same time period as “summer,” but STARS treats them as such. Therefore, if a facility operated during the ozone season but not during the summer months, provide a nonzero summer percentage (e.g., 1 percent) and report the ozone-season emissions.

### ***FIN Group Type, Profile, and Attributes***

In STARS, every facility has a group type and profile associated with it; a list of current group types and profiles is available in Table 6-1.

If a facility’s group type or profile is incorrect in the EI, please contact the EAS to have it updated. Group type and profiles cannot be updated through the STEERS-AEIR Web-EI system. If the information is incorrect (for example, a flare has a group type of “equipment leak fugitive”), provide updates with the supporting documentation, noting that you are correcting the facility’s profile.

For more information about the attributes (formerly characteristics) associated with each profile, identify the appropriate group type for the facility, and then consult the Glossary.

**Table 6-1. STARS Facility Group Types, Profiles, and Attributes**

Group Type	Profile	Attributes
Cleaning	<ul style="list-style-type: none"> <li>• Dip degreasing</li> <li>• Vapor degreasing</li> <li>• Barge cleaning</li> <li>• Railcar cleaning</li> <li>• Tank truck cleaning</li> <li>• Other</li> </ul>	Not applicable
Combustion	Flare	<ul style="list-style-type: none"> <li>• Design capacity in MMBtu per hour</li> <li>• Assist type (steam, air, or none)</li> <li>• Service type (process, emergency, or both)</li> <li>• HRVOC Service? (yes or no)</li> </ul>
Combustion	I.C. engine	<ul style="list-style-type: none"> <li>• Number of cycles (two or four)</li> <li>• Burn type (rich or lean)</li> <li>• Design capacity in MMBtu per hour</li> <li>• Engine rating in horsepower</li> </ul>
Combustion	Boiler, dryer, furnaces, heater, incinerator, kiln, oven, turbine, thermal oxidizer, other	<ul style="list-style-type: none"> <li>• Design capacity in MMBtu per hour</li> <li>• Firing type</li> </ul>
Combustion	Fluid catalytic cracking unit (FCCU)	Not applicable
Combustion	<ul style="list-style-type: none"> <li>• Boiler-Electric Generation</li> <li>• I.C. Engine-Electric Generation</li> <li>• Turbine-Electric Generation</li> </ul>	<ul style="list-style-type: none"> <li>• Design capacity in MMBtu per hour</li> <li>• Firing Type</li> <li>• Generation Capacity in MW</li> </ul>
Coating or printing	Coating or printing	Not applicable
Cooling tower	Cooling tower	<ul style="list-style-type: none"> <li>• Design flow rate in MM gallons per day</li> <li>• Draft design type (natural or mechanical)</li> <li>• Number of cells</li> <li>• Sampling schedule</li> <li>• Sample tested for VOCs?</li> <li>• Sampling data used to calculate emissions?</li> <li>• HRVOC Service? (yes or no)</li> </ul>

Group Type	Profile	Attributes
Equipment leak fugitives (Leaking component fugitives)	Equipment leak fugitives	<ul style="list-style-type: none"> <li>• Emissions determination methodology</li> <li>• Leak detection and repair (LDAR) program</li> <li>• % VOC in Stream</li> <li>• Monitoring equipment data</li> <li>• <i>Note:</i> For all these attributes refer to the Facility Information for Component Fugitives form.</li> </ul>
Loading	<ul style="list-style-type: none"> <li>• Railcar</li> <li>• Tanker truck</li> <li>• Railcar and tanker truck</li> <li>• Marine</li> <li>• Other</li> </ul>	Not applicable
Other	Other	Not applicable
Tanks <sup>2</sup>	<ul style="list-style-type: none"> <li>• Horizontal fixed roof</li> <li>• Vertical fixed roof</li> <li>• Internal floating roof</li> <li>• Pressure tank</li> <li>• Underground tank</li> <li>• External floating roof: double deck, single seal</li> <li>• External floating roof: pontoon, single seal</li> <li>• External floating roof: pontoon, double seal</li> <li>• Domed external floating roof: double deck</li> <li>• Domed external floating roof: pontoon</li> <li>• Other</li> </ul>	Attributes vary depending on the tank profile.

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2. Do not use the Tank profile for silos storing dry, solid materials. A more appropriate group type and profile is Other/Other.

Group Type	Profile	Attributes
VOC process	<ul style="list-style-type: none"> <li>• Analyzer</li> <li>• Blowdown operations</li> <li>• Delayed coker unit</li> <li>• Flexi coker unit</li> <li>• Glycol still</li> <li>• Polyethylene unit</li> <li>• Polypropylene unit</li> <li>• Mixing vessel</li> <li>• Reactor</li> <li>• Other</li> </ul>	Not applicable
Wastewater	Wastewater system	<ul style="list-style-type: none"> <li>• Flow model (flowthrough or disposal)</li> <li>• Aeration (diffused air, mechanical, or none)</li> <li>• Biodegradation mechanism (biodegradation, activated sludge, or none)</li> <li>• Design type (surface, subsurface, or other)</li> <li>• Depth</li> <li>• Surface area</li> <li>• Flow rate in MM gallons per day</li> </ul>
Wastewater	<ul style="list-style-type: none"> <li>• Basin</li> <li>• Clarifier closed sump</li> <li>• Lift station</li> <li>• Open sump</li> <li>• Reactor</li> <li>• Stripper</li> <li>• Separator</li> <li>• Other wastewater component</li> </ul>	Not applicable



## Control Device Information

Descriptions of the items in this section, along with information on accepted values, appear in the glossary.

For each abatement device, verify that the:

- Abatement code and number of units are correct.
- Percentage of time offline is reflected in annual emissions determinations.
- Inspection and maintenance schedule is accurate.
- Stated control efficiencies of each pollutant are accurate.

For abatement devices that can also be considered facilities, such as combustive abatement devices, ensure that these devices are not abating their own emissions. Abatement devices cannot abate themselves.

If an abatement device's abatement code appears incorrect in the EI, and the information can't be updated in the STEERS-AEIR Web-EI system, provide updates in the supporting documentation noting that the control device's abatement code has been corrected.

## Emission Point Information

Descriptions of most of the items in this section, along with information on accepted values, may be found in the glossary.

### ***Emission Point Coordinates***

Accurate coordinates for each emission point are essential to modeling and other air quality planning activities. All UTM and latitude-longitude coordinates must be expressed in the North American Datum of 1983 (NAD83) coordinate system and all latitudes and longitudes must be expressed as degrees, minutes, and seconds (in the format DDMMSS).

Verify that each emission point has accurate coordinates; for most non-fugitive emission points, these coordinates must be unique. Also, verify that the site centroid is correct.

### ***EPN Profiles***

In STARS, every emission point has a profile associated with it: currently, *stack*, *flare*, or *fugitive*. Associating each emission point with a profile allows TCEQ to collect data on sources of interest and facilitates data retrieval.

If the emission point profile is incorrect in the EI, please contact the EAS to have it updated. Profiles cannot be updated through the STEERS-AEIR Web-EI system.

## ***EPN Attributes***

Accurate emission point attributes are essential to modeling and other air quality planning activities. Emission point attributes must represent **actual** stack, fugitive, or flare attributes values, not values for permit modeling purposes. Verify that all emission points have accurate values.

## **Total Aggregate Annual Heat Input**

For combustion units, enter the total heat value (in MMBtu) of all fuels (including waste gases, liquids, and solids) that the facility combusted during the year. **This value must be entered every year. It is not carried over from the previous year.** When the facility has multiple emission points, do not divide the heat input between paths. Instead, sum the individual heat inputs and report the total annual aggregate heat input for the unit.

To determine the total aggregate annual heat input, first determine the heat input for **each** fuel that the facility combusted during the year by multiplying the fuel's gross heating (calorific) value (in Btu/lb) by the fuel's annual feed rate (in lb/year). Next, sum these individual annual heat inputs for all fuels combusted during the year, and convert from Btu to MMBtu to obtain the total aggregate annual heat input (in MMBtu/year).

## **Emissions Factors**

TCEQ requires that users enter NO<sub>x</sub> emissions factors in the EI.

To promote consistency among similar emission sources, TCEQ requests that the NO<sub>x</sub> emissions factors be based upon the following process-rate data. Examples of the preferred process-rate-based NO<sub>x</sub> factors include:

- lb/MMBtu (boilers, furnaces, heater, and turbines)
- g/hp-hr or lb/MMBtu (all engines)
- lb of NO<sub>x</sub>/ton of clinker (cement kilns)
- lb of NO<sub>x</sub>/ton of calcium oxide (lime kilns)
- lb of NO<sub>x</sub>/ton of product (lightweight aggregate)
- lb/Mgal (liquid-fired boilers)
- ppmv @ 0 percent O<sub>2</sub> (FCCUs)

If a NO<sub>x</sub> factor is reported as a lb/hour (or similar) rate, use the factor and the process rate at the time of testing to obtain a process-based emissions rate. For example, for combustion sources, divide the lb/hour emission rate by the MMBtu/hour fuel-usage rate to obtain a factor with units of lb/MMBtu. Similarly, for cement kilns, divide the lb/hour emission rate by the tons of clinker/hour to obtain a factor with units of lb/ton of clinker.

If the process-rate-based NO<sub>x</sub> factor from a CEMS or PEMS cannot be obtained, calculate one by converting the reported tons/year of NO<sub>x</sub> to lb/year, and then divide the result by the MMBtu/year heat input to obtain a NO<sub>x</sub> factor in units of lb/MMBtu.

Ensure that a NO<sub>x</sub> emissions factor has been entered for every NO<sub>x</sub> source on the “Emissions Factor” portion of the EI. **This value must be entered every year. It is not carried over from the previous year.**

*Note:* The factors must account for any controls. If controls exist, the reported NO<sub>x</sub> emission factor must not be an uncontrolled factor.

In cases where multiple NO<sub>x</sub> emissions factors exist (e.g., when the facility burns multiple types of fuel), either report a single weighted average NO<sub>x</sub> factor or report separate factors for each type of fuel.

## Updating Reported Emissions

The following discussion focuses primarily on updating emissions data for each path.

### ***Determination Methodology***

The determination methodology represents the method used to determine the reported emissions. Acceptable methods are described in Chapter 4.

Verify an emissions rate’s determination methodology every year, updating the methodology as needed with the correct code. To obtain the code for a particular determination methodology, consult the appropriate heading in Chapter 4.

### ***Annual Emissions***

For annual emissions, report total annual emissions for the year during routine operations for all contaminants emitted, quantified in tons. Annual emissions must not include emissions from emissions events or scheduled maintenance, startup, and shutdown activities that are **not** authorized by a new source review permit or PBR. However, annual emissions must include **authorized** emissions from maintenance, startup, and shutdown activities.

### ***Ozone Season Emissions***

For ozone season emissions, report emissions during the ozone season, measured in ppd. Recall that the ozone season is defined in Chapter 4, “Determining and Reporting Emissions.” Ozone season emissions are mandatory for all regulated entities in El Paso County and for all regulated entities in any county east of the Central Meridian. These counties are listed in subheading “Ozone Season Daily Rates are Required from Sites in These Counties” in Chapter 4.

### ***Scheduled Maintenance, Startup, and Shutdown***

Report emissions from scheduled maintenance, startup, and shutdown activities that are **not** authorized by a new source review permit or PBR in the “SMSS” category. Emissions from maintenance, startup, and shutdown activities that are **authorized** under a permit or PBR must not be included in the “SMSS” category. Instead, these

emissions must be summed into the “Annual” category. For more information on SMSS emissions, see Chapter 4.

### ***Emissions Events***

Report emissions from emissions events in the “EE” category. For more information on emissions events, see Chapter 4.

### ***Changing FIN and EPN Designations***

TCEQ does not normally change FIN or EPN designations, due to the historical nature of emissions data. Exceptions to this policy will be made to correct errors or to align EI nomenclature with permit nomenclature. FIN and EPN designations cannot be updated through the STEERS-AEIR Web-EI system. If revisions to FIN or EPN designations are necessary, submit a Revision Request form (TCEQ-20041f) and state a reason for the requested revisions. Include any applicable supporting information, such as a copy of the Maximum Allowable Emissions Rate Table (MAERT). Note that TCEQ reserves the right to approve or disapprove all such revision requests. Additional information about the Revision Request form is available in the instructions at the EAS webpage.