

CHAPTER 5—UPDATING AN EMISSIONS INVENTORY QUESTIONNAIRE

This chapter provides instructions for updating an Emissions Inventory Questionnaire (EIQ). Review all of the information in this book before attempting to update these forms.

Be certain to review all data on your EIQ printout for accuracy. Update EIQ items as necessary, using the blank provided (usually below or to the right of the item). If a blank is not provided for a specific item on the EIQ, simply write in the update next to the item, circling or highlighting it if possible. **Important:** Any items left unchanged, including emission rates, will be assumed to be correct for 2005 and will be entered into the STARS database as part of your 2005 inventory.

Updating EIQ Data

Special Notes

Sample Calculations

30 TAC Section 101.10(c) requires all accounts to submit sample calculations **representative** of the account processes. Submit sample calculations showing actual annual emissions determination for each different process type present in the account, providing enough data so that the determination results may be reasonably reproduced. Generic sample calculations cannot be accepted since they do not contain representative process data and do not demonstrate actual annual emissions determinations. Note that sample calculations are required to be submitted and updated each emissions inventory year.

Use Permanent Ink

Please use permanent ink instead of pencil when updating the EIQ. Pencil tends to smudge and can be difficult to read, increasing the chance of EIQ data entry errors or omissions. Permanent ink, especially ink in colors other than black, is clearer and more legible. No ink color restrictions exist, but colors other than black make EIQ updates more noticeable.

Electronic Accounts

Electronically update and submit all of the information discussed in this chapter in an approved electronic format, as outlined in the "STARS Electronic Reporting User's Guide." This document is available on the IEAS Web site at:

www.tceq.state.tx.us/implementation/air/industei/psei/psei.html

Account Information

General account information is printed at the top of the EIQ's first page. For a detailed description of the items in this section, consult Chapter 6's instructions for completing an Account Information form.

To make any significant changes to this information, notify Central Registry of the changes and send the IEAS a copy of the notification.

Emissions Inventory and Account Contact Information

For a detailed description of the requirements concerning emissions inventory contact and account contact information, please consult Chapter 6's instructions for completing a Contact Information form.

To update this information, please complete and submit the Contact Information form (Appendix B).

Criteria Emissions Totals

This section contains five columns for emissions reporting: Annual, Ozone, EE (Emissions Events), SMSS (Scheduled Maintenance, Startup and Shutdown activities), and EE/SMSS (totals from EE and/or SMSS emissions). The columns consist of six rows, each one representing a criteria pollutant. Each column contains two subcolumns: one with a printed number, one with a blank. The printed number reflects the total submitted on the most recent inventory. In the blank to the right of that number, you should enter the total for the current inventory.

Note that these reported emissions totals are not entered into STARS. Instead, these reported totals are used for comparison purposes, to ensure that STARS correctly sums the emissions reported within the EIQ itself. Emissions totals reported in the "Criteria Emissions Totals" section must be reported at the appropriate path(s) within the EIQ.

Also note that the EE/SMSS column, which an account once used to report total combined emissions from emissions events and/or SMSS activities, is now used by STARS to automatically calculate total emissions from emissions events and SMSS activities. Therefore, emissions from emissions events and/or SMSS activities must be reported in either the EE or SMSS column as appropriate. **If an account reports emissions in the EE/SMSS totals column, emissions must also be reported in the EE and/or SMSS column(s), as appropriate.**

For a thorough discussion of the elements of this section, please consult Chapter 4, "Determining and Reporting Emissions," and Chapter 6's instructions for completing an Account Emissions form.

Emissions Events Certifying Signature

Sign after this statement if and only if you experienced and reported no emissions from emissions events.

This signature is required by Texas Health and Safety Code Section 382.0215(f), which states in part: "An owner or operator of a facility required by Section 382.014 to submit an annual emissions inventory report and which has experienced no emissions events during the relevant year must include as part of the inventory a statement that the facility experienced no emissions events during the prior year."

For more information on emissions events, consult Chapter 4.

Signature of Legally Responsible Party

A complete inventory requires the signature of the individual responsible for certifying that the inventory is, to the best of her or his knowledge, accurate and complete. Fill in all of the blanks on this portion of the EIQ.

If you have questions regarding the definition of the legally responsible party, please consult 30 TAC Section 122.165, Certification by a Responsible Official.

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 instructions for completing the relevant Facility Information form. The following discussion focuses primarily on common issues about updating FIN data.

If you need to make corrections to any of the information in this section, please do so in the blanks provided.

Source Classification Code (SCC)

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

The EPA maintains a current list of SCCs in Excel file format at: www.epa.gov/ttn/chief/codes/index.html. When using this Excel file, only use the codes that have a value of "POINT" in the "Sector" column. Only those codes with a value of "POINT" in the "Sector" column 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 EIQ.

Status/Status Date

If you wish to change the facility's status, enter the appropriate letter and enter the date on which the status changed. Status options are:

- A (ACTIVE): If the facility operated the entire reporting year.
- I (IDLE): If the facility was idle or temporarily shut down for the entire reporting year.
- S (SHUTDOWN): If the facility has been permanently shut down and will never operate again. **Note that once a facility is shut down, it cannot be reactivated.**
- D (DEMOLISHED): If the facility has been removed from the site.
- N (PERMITTED BUT NEVER BUILT).
- O (OWNERSHIP TRANSFERRED TO A NEW OWNER): If the facility has been sold, or if responsibility for it has been transferred to another owner, during the reporting year. Provide the new owner's TCEQ Air Account Number, if known.

Operating Schedule and Annual Operating Hours

These fields should 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 annual data for the facility.

If a facility's operating schedule is inconsistent throughout the reporting year, enter the actual number of weeks that the facility operated in the weeks per year blank, and enter average data for the days/week and hours/day fields.

Seasonal Operating Percentages

Seasonal operating percentages represent the percentage of actual annual 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," June through August; "Fall," September through November; and "Winter," January, February, and December of the same calendar year. Note that the percentages must be reported as whole numbers (no decimals) and must sum to 100.

FIN Group Type, Profile, and Characteristics

In STARS, every FIN has a group type associated with it; a list of current group types is available in Table 11 in this chapter. You will notice that these group types now also appear on the Facility Information forms.

Associating each FIN with a group type allows the IEAS to collect data on sources of interest, and also facilitates data retrieval.

If the FIN's group type or profile appears incorrect, consult Table 11 in this chapter. Most of the group types are self-explanatory; for examples of facility types that belong to each group, reference the associated profiles, which also appear on the table. Note: new profiles have been added this year for combustion units serving electric generators.

If you determine that the FIN has an incorrect group type or profile (for example, a flare FIN has an equipment leak fugitive group type), correct the group type and profile on the EIQ itself. Next, complete the appropriate Facility Information form to update the FIN; in our example, you would need to complete a Facility Information for Combustion Unit—Flare Profile Facility Information form. Be sure to write the word "update" on the top of the form to avoid any confusion.

For more information about the characteristics associated with each profile, please identify the FIN's appropriate group type, and then consult the instructions for completing the relevant facility form in Appendix B. For example, if you wanted more information about a cooling tower's characteristics, you would consult the instructions for completing a Facility Information for Cooling Towers form.

Table 11. STARS FIN Group Types, Profiles, and Characteristics

Group	Profile	Characteristics
Cleaning	Dip degreasing Vapor degreasing Barge cleaning Railcar cleaning Tank car cleaning Other	Not applicable
Combustion	Flare	Design capacity in MMBtu per hour Assist type (steam, air, or none) Service type (process, emergency, or both)
	I. C. engine	Number of cycles (two or four) Burn type (rich or lean) Design capacity in MMBtu per hour <i>or</i> engine rating in horsepower
	Boiler, dryer, furnace, heater, incinerator, kiln, oven, turbine, thermal oxidizer, other	Design capacity in MMBtu per hour Firing type
	Fluid catalytic cracking unit (FCCU)	Not applicable
	Boiler- Electric Generation I. C. Engine- Electric Generation Turbine- Electric Generation	Design capacity in MMBtu per hour Firing Type Generation Capacity in MW
Coating or printing	Coating or printing	Not applicable
Cooling tower	Cooling tower	Design flow rate in MMgal per day Draft design type (natural or mechanical) Number of cells Sampling schedule Sample tested for VOCs? Sampling data used to calculate emissions?
Equipment leak fugitives (Leaking component fugitives)	Equipment leak fugitives	Emissions determination methodology* Leak detection and repair program* Component count* *reference the Facility Information for Leaking Component Fugitives and the Fugitive Data forms.
Loading	Railcar Tank truck Railcar/tank truck Marine Other	Not applicable
Other	Other	Not applicable

Table 11. STARS Group Types, Profiles and Characteristics, continued

Group	Profile	Characteristics
Tanks	Horizontal fixed roof Vertical fixed roof Internal floating roof Pressure tank Underground tank External floating roof: double deck, single seal External floating roof: double deck, double seal External floating roof: pontoon, single seal External floating roof: pontoon, double seal Domed external floating roof: double deck Domed external floating roof: pontoon Other	Reference the Facility Information for Storage Tanks form.
VOC process	Analyzer Blowdown operations Glycol still Polyethylene unit Polypropylene unit Mixing vessel Reactor Other	Not applicable
Wastewater	Wastewater system	Flow model (flowthrough or disposal) Aeration (diffused air, mechanical or none) Biodegradation mechanism (biodegradation, activated sludge, or none) Design type (surface, subsurface, or other) Depth Surface area Flow rate in MMgal per day
Wastewater	Basin Clarifier Closed sump Lift station Open sump Reactor Stripper Separator Other wastewater component	Not applicable

Control Device Information

Descriptions of the items in this section, along with information on accepted values, may be found in the instructions for completing the Abatement Device Information form (see Appendix B). If you need to

make corrections to any of the information in this section, please do so in the blanks provided.

For each CIN, verify that:

- the stated abatement efficiencies are accurate;
- the abatement code, number of units, and inspection and maintenance (I/M) schedule are accurate; and that
- the percent time offline is reflected in annual emissions determinations.

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

Emission Point Information

Descriptions of most of the items in this section, along with information on accepted values, may be found in the instructions for completing the relevant Emission Point Information form (see Appendix B). The following discussion focuses primarily on common issues concerning updating EPN data.

In STARS, every EPN has a "type" associated with it; currently, these types are as follows: stack, flare, and fugitive. You will notice that these types now also appear on the Emission Point Information forms. Associating each EPN with a type allows the IEAS to collect data on sources of interest, as well as facilitating data retrieval.

If the EPN type is incorrect, please complete and submit the appropriate Emission Point Information form from Appendix B, marking "update" on the top of the form to avoid confusion. Note that you must choose from the available emission point types.

UTM Coordinates

Accurate UTM coordinates for each EPN are essential to urban airshed modeling activities. All account UTM coordinates should be expressed in the North American Datum of 1983 (NAD83) coordinate system.

Verify that each account EPN has accurate NAD83 UTM coordinates; for most nonfugitive EPNs, these coordinates should be unique. Also, verify that the account centroid, printed on page 2 of the EIQ, is correct.

EPN Parameters

Accurate EPN parameters are essential to urban airshed modeling activities. EPN parameters should represent **actual** stack, fugitive, or flare

parameter values, not values for permit modeling purposes. Verify that all account EPNs have accurate, actual parameter values.

Changing FIN and EPN Designations

The IEAS does not normally allow changes to 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. If you feel revisions to FIN and/or EPN designations are necessary, please submit a Revision Request form (Appendix B); be sure to provide a reason for the requested revisions. Note that the IEAS reserves the right to approve or disapprove all such revision requests.

Total Aggregate Annual Heat Input

For combustion units, enter the total heat value (in MMBtu) of all fuels that the FIN combusted during the year.

To determine the total aggregate annual heat input, first determine the heat input for **each** fuel that the FIN 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

In the spaces provided, supply the emissions factors that were used to determine the emissions for this FIN/EPN path. In the far right column, enter the source from which the emissions factor originated.

In particular, providing NO_x emissions factor data within the EIQ will allow the IEAS to capture this data, which will be used to improve the TCEQ's airshed modeling and rule making activities. To promote consistency among similar emissions sources, the IEAS requests that the NO_x emissions factors be based upon the following process rate data. Examples of the preferred process-rate based NO_x factors include:

- lb/MMBtu (boilers, furnaces, heater, and turbines)
- g/hp-hr or lb/MMBtu (all engines)
- lb of NO_x /ton of clinker (cement kilns)
- lb of NO_x /ton of calcium oxide (lime kilns)
- lb of NO_x /ton of product (lightweight aggregate)
- lb/Mgal (liquid-fired boilers)
- ppmv @ 0% O₂ (FCCUs)

Ensure that a NO_x emissions factor has been entered for every NO_x source on the "Emissions Factor" portion of the EIQ.

Updating Reported Emissions

Detailed discussion of the items in this section may be found in Chapter 6's instructions for completing the Path Emissions form. The following discussion focuses primarily on common issues concerning updating path emissions data.

Updated emissions must be reported on the appropriate EIQ forms. **The IEAS does not allow the submission of spreadsheets in lieu of completed EIQ forms.**

Annual Emissions

Annual emissions consist of total emissions rates for the year for all contaminants emitted, measured in tons. Actual annual emissions should not include emissions from emissions events or scheduled maintenance, startup or shutdown activities. Ensure that all criteria emissions totals (as updated on the front page of the EIQ) are included as path emissions within the body of the EIQ.

Update annual emissions under the "Path Emissions" portion of the EIQ. The printed numbers in this section reflect the emissions rates submitted on the most recent inventory. Enter the new rates in the space provided; only **one** rate may be entered per blank. If an emissions rate did not change, simply circle the printed rate.

Ozone Season Emissions

Ozone season emissions consist of actual contaminant emissions rates during the ozone season, measured in pounds per day. Recall that the ozone season is defined as the 92 days from June 1 to August 31, inclusive; see Chapter 4, "Determining and Reporting Emissions," for more details. Ozone season emissions are mandatory for all accounts in El Paso County and for all accounts in any county east of the Central Meridian. A list of these counties is provided in Table 10 in Chapter 4 (see index for page number). Ozone season rates can no longer be automatically calculated by the IEAS database.

The printed numbers in this section reflect the emissions rates submitted on the most recent inventory. Enter the new rates in the space provided; only **one** rate may be entered per blank. If an emissions rate did not change, you may simply circle the printed rate.

Emissions Events (EE)

Report emissions from emissions events in the EE column, using the blanks provided. For more information on emissions events, see Chapter 4, “Determining and Reporting Emissions.”

Scheduled Maintenance, Startup, and Shutdown Activities (SMSS)

Report emissions from scheduled maintenance, startup, and shutdown activities (SMSS) in the SMSS column, using the blanks provided. For more information on SMSS emissions, see Chapter 4, “Determining and Reporting Emissions.”

EE/SMSS Column: Reporting Guidelines

The EE/SMSS column, which an account once used to report total combined emissions from emissions events and/or SMSS activities, is now used by STARS to automatically calculate total emissions from emissions events and SMSS activities. Therefore, since total EE/SMSS emissions are automatically generated by the database, **total combined** EE/SMSS emissions no longer need to be reported in this column.

However, as outlined in the previous section, emissions from emissions events and/or SMSS activities must be reported in either the EE or SMSS column, as appropriate. **If an account reports emissions in the EE/SMSS totals column, emissions must also be reported in the EE and/or SMSS column(s), as appropriate.**

Determination Methodology

The determination methodology represents the method used to determine the reported emissions. Acceptable methods are described in Chapter 4 and, for certain source types, in Appendix A.

Verify an emissions rate’s determination methodology every year, updating the methodology as needed with the correct code under the “Method” heading (on the Path Emissions portion of the EIQ). To obtain the code for a particular EIQ determination methodology, consult the appropriate heading in Chapter 4. Preceding each determination methodology’s heading is a single letter, such as “A” or “V,” which represents the **code** entered on the EIQ when using that emissions determination methodology.

Adding Emissions Rates

To add an emissions rate to the EIQ, you will first need a contaminant code. Contaminant codes are unique five-digit codes associated with individual contaminants. A list of contaminant codes is available under the heading "Tools for Completing the Point Source Emissions Inventory Questionnaires" on the IEAS Web site. A hard copy of this list is available

in *Contaminant and Abatement Codes for the Air Emissions Inventory* on the IEAS Web site at:

www.tceq.state.tx.us/implementation/air/industei/psei/psei.html.

To report emissions of a contaminant not printed on the form, simply add the following below the last printed entry:

- the contaminant code;
- the associated annual, ozone, EE, and SMSS emissions rates (as applicable); and
- the determination methodology.

If you wish to add numerous contaminants that will not fit on the EIQ page itself, you may submit a Path Emissions form with the appropriate information. On the form, note that both the FIN and EPN are "existing" in the gray box directly above the FIN and EPN blanks.

If a contaminant does not appear to have a contaminant code, try electronically searching for the contaminant's CAS (Chemical Abstracts Service) number in *Contaminant and Abatement Codes for the Air Emissions Inventory*, available as a PDF on the IEAS Web site at: **www.tceq.state.tx.us/implementation/air/industei/psei/psei.html**. If a CAS number search fails, contact the IEAS for assistance; be sure to have the chemical's name and CAS number when you call.

Emissions Rates: Numeric Format

STARS (the IEAS' database) cannot accept emissions rates beyond four decimal places. Emissions rates that extend beyond four decimal places should be rounded as appropriate to conform to STARS' four decimal place limit. Under no circumstances may scientific notation be used when reporting emissions rates, as this numeric format cannot be data-entered into STARS.

Only one emissions rate can be entered per blank. STARS does not support the routine reporting of emissions rates for time periods of less than one year, such as quarterly emissions rates.