THE HOUSTON-GALVESTON-BRAZORIA AREA

Minor Source Rule

An Air Quality Rule for Equipment at Your Business

What Are the Operating, Monitoring, Testing, and Emission-Calculation Requirements of the Minor Source NO_x Rule?

RG-440B (Revised 5/10)

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Published and distributed by
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

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This document is not a replacement for Chapter 117 rules. Other compliance requirements may apply (monitoring, testing, record keeping, reporting, notification, etc.). Under Texas law, all new or modified air-pollutant-emitting facilities statewide have to obtain permit authorization, under either Chapter 106 or 116. Separately and additionally, Chapter 117 requires NO_x reductions in specific areas in order to meet federal ambient ozone standards. Separate permitting and/or federal requirements may apply. Download rules from the TCEQ Web site: <www.tceq.state.tx.us/goto/rules>.

Minor Source Rule

An Air Quality Rule for Equipment at Your Business

What are the operating, monitoring, testing, and emission-calculation requirements of the Minor Source NO_x Rule?

How can this guide help me?

This publication will help you determine the emissions of nitrogen oxides (NO_x) from combustion devices, such as boilers, process heaters, stationary engines, and turbines. Determining NO_x emissions is required by the TCEQ's air quality rules for area minor-source combustion devices in the Houston-Galveston-Brazoria area. The HGB Minor Source Rule is designed to protect air quality and human health.

This publication will lead you through the calculation process necessary to determine compliance with Title 30, Texas Administrative Code (30 TAC), Sections 117.2000–2045. **Use this publication to determine the emissions associated with the applicable combustion devices.**

Keep in mind that this guide does not contain the complete rules or all of the information you may need to be in compliance.

See Note One on page 9 for instructions on finding the text of this rule and other state environmental rules at the Secretary of State's Web site. You may keep up to date with efforts to improve air quality in the Houston-Galveston-Brazoria area by signing up for the automated mailing list for Texas' State Implementation Plan (SIP), or subscribe to the TCEQ's e-mail update service at <www.tceq.state.tx.us> and click on the "sign up for e-mail updates" icon. To join the mailing list, send a blank e-mail with no subject or message to <join-sip@listserv.tceq.state.tx.us>. You will be notified of stakeholder meetings, public hearings, and comment periods for draft rules and air quality plans.

See Note Two for instructions on how to locate additional information about this rule.

See Note Three for assistance with determining whether your facility is included in the Mass Emissions Cap and Trade program.

Note Four explains how to calculate annual heat input, and Note Five will help you determine whether additional rules might apply to your facility.

Determine your emissions specifications.

Step A1. Determine the maximum capacity of your equipment.

Maximum rated capacity is the maximum amount of work that your equipment can perform. This value can be found on the faceplate of your equipment or in the owner's manual.

1. Enter the maximum rated capacity of your equipment on Dec. 31, 2000. _____

2. Enter the maximum rated capacity after Dec. 31, 2000. _____

3. Enter the greater of the numbers in row 1 or row 2. _____

4. If you have a permit that was **administratively complete** before Jan. 2, 2001 and **issued on or after Jan. 2, 2001:**

   A. Enter the maximum rated capacity from your **permit application** here. _____

   B. Enter the maximum rated capacity from your **permit** here. _____

   C. If the number in row 4B is equal to or greater than the number in row 4A, enter it here. If not, leave this row blank. _____

5. You may choose either the number in row 3 or 4C.
   - ☛ This is your maximum rated capacity. Enter it here and on line 11 of your Equipment Profile Worksheet found in TCEQ Publication RG-440A or online at <www.tceq.state.tx.us/goto/nox-hgb>.
   - ☛ Use this number in your Emission Specification Tables, Tables EST 1–5 (below). _____

Step A2. Determine your unit classification (boiler, process heater, etc.).

How was your unit classified on Dec. 31, 2000? _____

- ☛ Use the unit classification below in the Emission Specification Tables. Enter it on line 11 of your Equipment Profile Worksheet.

Step A3. Determine your applicable averaging time.

Question 1

Are you subject to the Cap and Trade Program? (For assistance with making this determination, see Note Three.)

YES ---- Your averaging time is specified in the TCEQ Cap and Trade rule.
NO------ Go to Question 2.

Question 2

Does your equipment have a continuous emissions monitoring system (CEMS) or a predictive emissions monitoring system (PEMS)?

YES ---- Your averaging time is specified in Table EST 3.
NO------ Your averaging time is a block one-hour average, in the units of the applicable emission standard.

Table A3.1: Averaging time for units with a CEMS or PEMS, not subject to the Cap and Trade program

To determine averaging time, use **any** of the following procedures:
1. 30-day average period (in units of the applicable standard) 2. Block one-hour averaging period (in units of the applicable standard) 3. Block one-hour averaging period in pounds per hour for boilers and process heaters (pounds per hour = maximum rated capacity × applicable limit of NO_x in lb/MMBtu)

Enter the appropriate averaging time on line 8 of the Equipment Profile Worksheet, which can be downloaded at <www.tceq.state.tx.us/goto/nox-hgb>.

Step A4. Review the Emission Specification Table that applies to your equipment.

Table A4.1: What emission specification applies to your equipment?

Type of Equipment	Review the following
Boilers, process heaters	Go to EST 1
Gas turbines including duct burners	Go to EST 2
Gas-fired, reciprocating internal combustion engines	Go to EST 3
Dual-fuel, reciprocating internal combustion engines	Go to EST 4
Diesel, reciprocating internal combustion engines	Go to EST 5

EST 1: Boilers and Process Heaters

Type of Unit	Emission Specification
Gas fired	0.036 lb/MMBtu of heat input or 30 ppm by volume at 3% oxygen, dry basis
Liquid fired	0.072 lb/MMBtu of heat input or 60 ppm by volume at 3% oxygen, dry basis

EST 2: Gas Turbines, including Duct Burners

Type of Unit	Emission Specification
All	0.15 lb/MMBtu

EST 3: Gas-Fired, Reciprocating Internal Combustion Engines

Type of Unit	Emission Specification
Fired on landfill gas	0.60 gram per horsepower-hour (g/hp-hr)
Other	0.50 g/hp-hr

EST 4: Dual-Fuel, Reciprocating Internal Combustion Engines

Type of Unit	Emission Specification
All	5.83 g/hp-hr

EST 5: Diesel, Reciprocating Internal Combustion Engines

Emission specifications depend on the **combination of horsepower and the date installed**, so be sure you have checked both.

Horsepower	Date Installed, Modified, Reconstructed, or Relocated	Emission Specification *In grams per horsepower-hour (g/hp-hr)*
Greater than 50	Before Oct. 1, 2001, **and** not modified, reconstructed, or relocated on or after Oct. 1, 2001	The lower of 11.0 g/hp-hr **or** the emission rate established by testing, monitoring, manufacturer guarantee, or other data from manufacturers
Greater than or equal to 50 and less than 100	On or after Oct. 1, 2001, but before Oct. 1, 2003	6.9 g/hp-hr
	On or after Oct. 1, 2003, but before Oct. 1, 2007	5.0 g/hp-hr
	On or after Oct. 1, 2007	3.3 g/hp-hr
Greater than or equal to 100 and less than 175	On or after Oct. 1, 2001, but before Oct. 1, 2002	6.9 g/hp-hr
	On or after Oct. 1, 2002, but before Oct. 1, 2006	4.5 g/hp-hr
	On or after Oct. 1, 2006	2.8 g/hp-hr
Greater than or equal to 175 and less than 300	On or after Oct. 1, 2001, but before Oct. 1, 2002	6.9 g/hp-hr
	On or after Oct. 1, 2002, but before Oct. 1, 2005	4.5 g/hp-hr
	On or after Oct. 1, 2005	2.8 g/hp-hr
Greater than or equal to 300 and less than 600	On or after Oct. 1, 2001, but before Oct. 1, 2005	4.5 g/hp-hr
	On or after Oct. 1, 2005	2.8 g/hp-hr
Greater than or equal to 600 and less than 750	On or after Oct. 1, 2001, but before Oct. 1, 2005	4.5 g/hp-hr
	On or after Oct. 1, 2005	2.8 g/hp-hr
Greater than or equal to 750	On or after Oct. 1, 2001, but before Oct. 1, 2005	6.9 g/hp-hr
	On or after Oct. 1, 2005	4.5 g/hp-hr

Step A5. Compare the emission specification from the tables in Step A4 to the specification in any applicable permit.

1. Enter your emission specification from the tables in step 4. _____

2. Enter NO_x permit limit from any permit issued before Jan. 2, 2001. _____

3. Enter NO_x permit limit from any permit issued on or after Jan. 2, 2001, **if** the application for the permit was **administratively complete** before Jan. 2, 2001. _____

4. Enter NO_x permit limit from any permit by rule **if construction** under the permit by rule **began before Jan. 2, 2001**. _____

5. Enter the lowest of the numbers in rows 1, 2, 3, or 4. _____
   ☛ This value is the NO_x limit for your equipment. Enter it on line 12 A of your Equipment Profile Worksheet.

Step A6. If your equipment has an annual capacity factor of 0.0383 or less, see 30 TAC 117.2010(c)(6) and 117.2010(h) under "Additional Emission Specifications" in Note Five.

If you make changes after Dec. 31, 2000, to equipment not subject to any of the emission specifications in these rules and the changes increase the equipment's NO_x emissions, see 30 TAC 117.2010(f) under "Additional Emission Specifications" in Note Five.

Step A7. If your unit is subject to any of the emission specifications in the tables in step A4, there are additional emission specifications for gases other than NO_x. These standards are described in Table 7.1.

Enter any CO emission standards on line 12 B of your Equipment Profile Worksheet.
Enter any emission standards for ammonia on line 12 C of your Equipment Profile Worksheet.

Table 7.1: Additional Emission Standards

Applicable Compound	Equipment	Emission Standard	Averaging Period	
			With CEMS or PEMS for the applicable compound	Without CEMS or PEMS
Carbon monoxide (CO)	Boilers, process heaters, gas turbines	400 ppmv at 3.0% O_2 (dry basis)	On a rolling 24-hour averaging period	On a one-hour averaging period
	Stationary internal combustion engines	3.0 g/hp-hr		
Ammonia (NH_3)	Boilers and process heaters that inject urea or ammonia into the exhaust stream	10 ppmv at 3.0% O_2 (dry basis)	On a rolling 24-hour averaging period	Block one-hour averaging period
	Gas turbines (including duct burners) and gas-fired, lean-burn engines	10 ppmv at 15.0% O_2 (dry basis)		
	All other equipment	10 ppmv at 3.0% O_2 (dry basis)		

Note: If your equipment cannot meet the limits for carbon monoxide or ammonia in Table 7.1, a different emission specification may be approved by the TCEQ. See 30 TAC 117.2025 for details.

☛ To obtain assistance with these environmental requirements, please contact your local equipment technician, equipment operator, or stack-testing specialist.

☛ A stack-testing company will be able to perform an emissions test to determine whether your equipment meets the emissions limits.

Important: If your equipment **does not** meet the emissions limits, you **must** repair, retrofit, or replace it.

☛ Once your equipment has been repaired, retrofitted, or replaced, you must perform another stack test within 180 days of the equipment-startup date in order to determine emission requirements. Send the results of the second test to the TCEQ Region 12 office within 60 days.

Determine operating requirements for your equipment.

Step B1. Determine equipment operating requirements.

Review Table B1.1 to determine operating requirements in these rules that apply to your equipment. There may be several operating requirements that apply, so review every line in the table.

Table B1.1: Equipment Operating Requirements

Equipment	Operating Requirement
Boilers **except** wood-fired boilers	Must be operated with oxygen (O_2), carbon monoxide (CO), or fuel trim.
Boiler or process heater with forced flue gas recirculation (FGR) to reduce NO_x emissions	Proportional design rate of FGR must be maintained, consistent with combustion stability, over the operating range.
Equipment with post-combustion control techniques	Reducing agent injection must limit NO_x concentrations to no more than the NO_x concentrations at maximum rated capacity.
Stationary internal combustion engine controlled with nonselective catalytic reduction (NSCR)	Must be equipped with an automatic air-fuel-ratio controller operating on exhaust O_2 or CO control and meet applicable emission standards.
Stationary internal combustion engine monthly run time **exceeds** 10 hours	Check for proper operation by recording NO_x and CO emissions: ■ Quarterly and ■ Within two weeks after— ✦ any engine maintenance which might increase emissions; **or** ✦ O_2-sensor replacement **or** ✦ catalyst cleaning or replacement ■ After installing any controls ■ After major repair work ■ Any time you believe emissions may have changed
Stationary internal combustion engine monthly run time **does not exceed** 10 hours	Check for proper operation by recording NO_x and CO emissions: ■ Within two weeks of— ✦ any engine maintenance which might increase emissions; **or** ✦ O_2-sensor replacement; **or** ✦ catalyst cleaning or replacement ■ After installing any controls ■ After major repair work ■ Any time you believe emissions may have changed

No person shall start or operate any stationary **diesel** or **dual-fuel** engine for testing or maintenance between the hours of 6 a.m. and noon, *except*:

- for specific manufacturer's recommended testing requiring a run of over 18 consecutive hours;
- to verify reliability of emergency equipment (e.g. emergency generators or pumps) immediately after unforeseen repairs (routine maintenance such as an oil change is not considered to be an unforeseen repair); or
- firewater pumps for emergency-response training conducted in April through October.

Determine monitoring, testing, record-keeping, and reporting requirements for your equipment.

Step C1. Determine monitoring requirements.

Question 1

Are you subject to the Cap and Trade program? (For assistance with making this determination, see "Calculating Potential Emissions" in Note Three.)

YES ---- Review Table C1.1.
NO------ Go to Question 2.

Question 2

Are you an exempt boiler located on independent school district property?

YES ---- Review Table C1.1 **OR**
Keep written or electronic records of the following:

a. annual fuel usage for the equipment
b. total monthly fuel usage for the entire site
c. estimated monthly hours of operation for each unit
d. estimated monthly average operating rate (a percentage of the maximum rated capacity) for each unit
e. estimated monthly fuel usage for each unit

Records are to be available upon request for five years. Within 60 days of a records request, submit all methods, engineering calculations, and process information used to estimate hours of operation, operating rates, and fuel usage of each unit. (For guidance on keeping records, visit <www.tceq.state.tx.us/goto/nox-hgb>.)

NO------ Review Table C1.1.

Table C1.1: Totalizing Fuel-Flow Meters and Other Monitoring Requirements

Totalizing Fuel-Flow Meters
Totalizing fuel flow meters must be accurate within ± 5 percent. A computer that collects, sums, and stores electronic data from continuous fuel-flow meters is an acceptable totalizer. *Note:* If your equipment has a pilot, see "Units with Pilots" in Note Five.
Alternatives to Totalizing Fuel-Flow Meters
1. Equipment operating with an NO_x **and** diluent CEMS may monitor stack-exhaust flow using specifications found in 40 CFR Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A. 2. Units that vent to a common stack with a NO_x **and** diluent CEMS may use a single, totalizing flow meter. [See 30 TAC 117.2035(a)(2)(B) for details.] 3. Diesel engines operating with run-time meters may meet the fuel-flow monitoring requirements through monthly fuel-use records. 4. Units of the same category and subject to Cap and Trade may share a single, totalizing fuel-flow meter. [See 30 TAC 117.2035(a)(2)(D) for details.] 5. Exempt boilers may share a single, totalizing fuel-flow meter. [See 30 TAC 117.2035(a)(2)(F) for details.]

Table C1.1: Totalizing Fuel-Flow Meters and Other Monitoring Requirements (cont.)

Oxygen (O_2) Monitors
■ If oxygen monitors are installed, the requirements of 30 TAC 117.8100 regarding location and calibration should be considered appropriate guidance. ■ The installation of O_2 monitors is optional.
NO_x Monitors
■ If a CEMS or PEMS is installed, it must meet the requirements of 30 TAC 117.8100. ■ A PEMS must predict the pollutant emissions in the units of the applicable emission specification. ■ The installation of NO_x monitors is optional.

Step C2. Determine testing requirements for your equipment.

Are you subject to the TCEQ Cap and Trade program?

YES ---- Review testing requirements in Table C2.1 and Emission Allowances in Table C2.2.
NO------ Review testing requirements in Table C2.1.

Table C2.1: Testing Requirements

- Testing must be performed in accordance with the schedule in 30 TAC 117.9200.
- Submit test reports to the TCEQ within 60 days of completing the test.
- Each unit must be tested for emissions of nitrogen oxides, carbon monoxide, and oxygen.
- If urea or ammonia is injected into the exhaust stream for NO_x control, use one of the ammonia-monitoring procedures in 30 TAC 117.8130 to demonstrate compliance with the emission specification in 30 TAC 117.2010(i)(2).
- All testing must be done with the equipment running as close as possible to maximum capacity.
- Compliance is determined by averaging three 1-hour emission-test runs using any one of several different testing methods. Your testing service can help you determine which method is best for you. [See 30 TAC 117.2035(e)(3) for a list of the applicable methods.]
- Test results must be in the units of the appropriate emission limit and averaging period. (If you use a test method from 40 CFR Part 60, Appendix A, the testing report must contain the information specified in 30 TAC 117.8010.)

Units with CEMS or PEMS	Units without CEMS or PEMS
■ CEMS or PEMS must be operational before testing. Verification that CEMS or PEMS is operational must include: a. completion of the initial monitor certification and b. manufacturer's written requirements or recommendations for installation, operation, and calibration. ■ Initial compliance with emission specifications must be demonstrated **after monitor-certification testing** using the NO_x CEMS or PEMS.	■ Retesting is **required** within 60 days of any modification that could increase the NO_x emissions. ■ Retesting **may be performed** after any modification that could decrease the NO_x emissions. ■ Retesting establishes a new NO_x emission factor, which is used to calculate actual emissions from the date of the retest forward.

Table C2.2: Emission Allowances

- NO_x testing and monitoring data and equipment activity data are used to establish the emission factor. The emission factor is used to calculate actual emissions for compliance with the Cap and Trade program.
- If a unit requires retesting, the retesting is used to establish a new NO_x emission factor for calculations under the TCEQ Cap and Trade program.

See 30 TAC 117.2035(e)(7)(C) and 117.2035(f) for details.

Step C3. Determine record-keeping requirements for your equipment.

For assistance with record-keeping requirements, see publication RG-440C, *What Are the Record-Keeping and Reporting Requirements of the Minor Source NO_x Rule?*

Note One: How to Locate TCEQ and EPA Rules

This regulatory guide explains some sections of Texas' Minor Source Rule (30 TAC 117.2000–2045).

To find the text of this rule, follow these steps:

1. Go to <www.sos.state.tx.us/tac/index.shtml>.
2. Click <info.sos.state.tx.us/pls/pub/readtac$ext.viewtac> at the bottom of the page.
3. Click *Title 30 Environmental Quality.*
4. Click *Part 1 Texas Commission on Environmental Quality.*
5. Click Chapter *117 Control of Air Pollution from Nitrogen Compounds.*
6. Click *Subchapter D Combustion Control at Minor Sources in Ozone Nonattainment Areas*.
7. Click *Division 1 Houston-Galveston-Brazoria Ozone Nonattainment Area Minor Sources.*

You can find the text of other state environmental rules by following steps 1–4 and then clicking on the appropriate chapter and subsequent links.

Federal environmental rules from the EPA are in Title 40 of the Code of Federal Regulations. The CFR can be found at <www.gpoaccess.gov/cfr/index.html>. There are multiple versions reflecting various amendments over the years. You should check the 2005 version unless otherwise specified in this document.

Note Two: How to Locate Compliance-Assistance Information for the NO_x Minor Source Rule

Companion TCEQ publications in this series: *Is My Boiler, Process Heater, Stationary Engine, or Turbine Regulated under the Minor Source NO_x Rule?* (RG-440A) and *What Are the Record-Keeping and Reporting Requirements of the Minor Source NO_x Rule?* (RG-440C). The series contains information to assist you in complying with the rules in 30 TAC 117. Call TCEQ Publications at 512-239-0028 to request copies, or view and print publications at <www.tceq.state.tx.us/goto/nox-hgb>.

Note Three: Determining Mass Emission Cap and Trade Applicability

To determine whether the Cap and Trade program applies to your site you must review the equipment on your site that can emit NO_x and is subject to emission specifications in 30 TAC 117.2010. Then use the calculations listed below to estimate your potential emissions. The calculations are **only estimates,** not the final and most accurate determination of your emissions.

Step N3.1. List each unit at your site that can emit NO_x.

Step N3.2. Do not include equipment not subject to 30 TAC 117.2010 (emission specifications) such as:

- Flares
- General Engines:
  - Engines with a horsepower rating of less than 50 hp.
  - Engines used in research and testing only.
  - Engines used for performance verification and testing only.
  - Engines used solely to power other engines or gas turbines during startups.
  - Engines used exclusively by agricultural operations for growing crops or raising animals, including fowl.
- Emergency Engines:
  - Engines operated only in emergency situations for which testing or maintenance operation is 52 hours or less per year, based on a rolling 12-month average. (If the engine is diesel it must have been placed into service before Oct. 1, 2001, and must not have been modified after Oct. 1, 2001.)
  - Engines used in response to any officially declared disaster or state of emergency.
- Diesel Engines:
  - Placed into service **before** Oct. 1, 2001, that
    - operate less than 100 hours per year (based on a rolling 12-month average) and
    - have not been modified, reconstructed, or relocated on or after Oct. 1, 2001.
  - Placed into service **after** Oct. 1, 2001, that
    - operate less than 100 hours per year in non-emergency situations (based on a rolling 12-month average) and
    - meet emission standards for non-road engines in effect at the time of installation, modification, reconstruction, or relocation.
- Boilers and Process Heaters:
  - Maximum rated capacity of 2.0 MMBtu/hour or less.
  - Maximum rated capacity greater than 2.0 MMBtu/hr and less than 5.0 MMBtu/hr and annual heat input less than or equal to 1.8 (10^9) British thermal units (Btu) per calendar year.
  - Maximum rated capacity greater than or equal to 5.0 MMBtu/hr and annual heat input less than or equal to 9.0 (10^9) Btu per calendar year.

Step N3.3. For all units remaining on the list, calculate the design capacity emission rate. (For assistance with boiler and heater calculations, visit <www.tceq.state.tx.us/goto/nox-hgb>.

Calculation notes:

- The emission factor can be determined by stack testing or the vendor's guarantee. The emission factor is the amount of NO_x emitted **before** any pollution controls are applied.
- Design capacity is from information supplied by the manufacturer. It may be on the nameplate on the equipment.
- The number of operating hours in a year is 8,760 (for these calculations).
- The number of pounds in a ton is 2,000.
- The number of grams in a ton is 907,184.74.

A. For boilers, heaters, furnaces, duct burners, and turbines, use the following formula:
a = Emission factor in lbs of NO_x/MMBtu
b = Design capacity in MMBtu/hr

$$(a \times b) \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} = \text{tons } NO_x \text{ per year}$$

B. For *oil-fired* boilers, heaters, and furnaces, use the following formula:
a = Emission factor in lbs of NO_x/Mgal
b = Design capacity in Mgal/hr

$$(a \times b) \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} = \text{tons } NO_x \text{ per year}$$

C. For engines, use the following formula:
a = Emission factor in grams of NO_x/horsepower-hour (g/hp-hr)
b = Design capacity in hp

$$(a \times b) \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{907{,}184.74} = \text{tons } NO_x \text{ per year}$$

Step N3.4. Add together the amounts from the calculations for each piece of equipment, which will equal your total tons per year (tpy) for the site.

Step N3.5. Determine if you are subject to the Mass Emissions Cap and Trade Program.

Cap and Trade Program

- If tpy = 9 or more, **you may be subject to the Cap and Trade program**.
  The Cap and Trade threshold is 10 tpy or more. Because this calculation is only an estimate, it is recommended that, if your total is 9 tpy or more, you contact the TCEQ Air Quality Planning section at 512-239-4900 to determine if your site must participate in this program.

Note Four:
Calculating Annual Heat Input in MMBtu

Step N4.1. Gather your monthly gas bills for January through December.

Step N4.2. Convert the unit on your gas bill to ccf, if necessary.

Step N4.3. Fill in the "Input data" tab on the spreadsheet available at <www.tceq.state.tx.us/goto/nox-hgb>. This spreadsheet will help you calculate your annual heat input using either AP-42 factors or vendor specifications.

Step N4.4. Your annual heat input based on fuel usage can be found on the "Print Data" tab.

Note Five: Additional Rule Requirements

Units with Pilots

Fuel flow to pilots for units with pilot fuel supplied by a separate fuel system or from an unmonitored portion of the same fuel system may be calculated using the manufacturer's design flow rates rather than measured with a fuel-flow meter. The calculated pilot fuel-flow rate must be added to the monitored fuel flow when fuel flow is totaled. [30 TAC 117.2035(a)]

Additional Emission Specifications

These specifications apply only in specific situations. Please review them to determine if they apply to your site.

- **For equipment changes that cause NO_x emissions in other equipment to increase**

  30 TAC 117.2010(f) Changes after Dec. 31, 2000, to a unit subject to an emission specification in subsection (c) of this section (ESAD [emission specification and attainment demonstration] unit) which result in increased NO_x emissions from a unit not subject to an emission specification in subsection (c) of this section [i.e. 30 TAC 117.2010(c)] (non-ESAD unit), such as redirecting one or more fuel or waste streams containing chemical-bound nitrogen to an incinerator with a maximum rated capacity of less than 40 MMBtu/hr or a flare, is only allowed if:
  1. the increase in NO_x emissions at the non-ESAD unit is determined using a CEMS or PEMS which meets the requirements of 30 TAC 117.2035(c), or through stack testing which meets the requirements of 30 TAC 117.2035(e); and
  2. either of the following conditions is met:
     (A) for sources which are subject to 30 TAC Chapter 101, Subchapter H, Division 3, a deduction in allowances equal to the increase in NO_x emissions at the non-ESAD unit is made as specified in section 101.354 (relating to Allowance Deductions); or
     (B) for sources which are not subject to 30 TAC Chapter 101, Subchapter H, Division 3, emission credits equal to the increase in NO_x emissions at the non-ESAD unit are obtained and used in accordance with section 117.9800 (relating to Use of Emissions Credits for Compliance).

- **For equipment with an annual capacity factor of 0.0383 or less**

  30 TAC 117.2010(c)(6) As an alternative to the emission specifications in 30 TAC 117.2010(c)(1–5) for units with an annual capacity factor of 0.0383 or less, 0.060 lb/MMBtu heat input. For units placed into service on or before Jan. 1, 1997, the 1997–99 factor for average annual capacity is to be used to determine whether the unit is eligible for the emission specification of this paragraph. For units placed into service after Jan. 1, 1997, calculate the annual capacity factor from two consecutive years in the first five years of operation to determine whether the unit is eligible for the emission specification of this

paragraph, using the same two consecutive years chosen for the activity-level baseline. The five-year period begins at the end of the adjustment period as defined in 30 TAC 101.350 (Definitions).

30 TAC 117.2010(h) The availability under the preceding paragraph of an emission specification for units with an annual capacity factor of 0.0383 or less is based on the unit's status on Dec. 31, 2000. Reduced operation after Dec. 31, 2000, cannot be used to qualify for a more lenient emission specification under the preceding paragraph than would otherwise apply to the unit.