

The Houston-Galveston-Brazoria Area Minor Source Rule: An Air Quality Rule for Equipment at Your Business

What are the Record-keeping and Reporting Requirements of the Minor Source NO_x Rule? (Boilers, Process Heaters, Stationary Engines, and Turbines)

How can this fact sheet help me?

This fact sheet summarizes the Texas Commission on Environmental Quality's (TCEQ) record-keeping and reporting requirements of the minor source nitrogen oxides (NO_x) rules in the Houston-Galveston-Brazoria Area. NO_x sources include equipment such as boilers, process heaters, stationary engines, and turbines. This rule applies only to businesses that qualify as minor sources. This rule is designed to protect air quality and human health.

This fact sheet will provide compliance information to assist with proper record-keeping and reporting requirements in accordance with the rules found in 30 Texas Administrative Code (TAC), Chapter 117, Subchapter D, Division 1, §117.2000 - §117.2045.

What if I'm in violation of TCEQ rules?

It is always better to report your own violations than to be the subject of a complaint or to have violations discovered by the TCEQ during an investigation. If you find that you are in violation of TCEQ rules, you are encouraged to make good-faith efforts to report problems as soon as you become aware of them and to develop a TCEQ-approved plan to correct those problems.

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

See Appendix A for instructions on finding the text of this rule and other state environmental rules on 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 TCEQ's State Implementation Plan (SIP) automated mailing list, 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>. By doing so, you will be notified of stakeholder meetings, public hearings, and comment periods for draft rules and air quality plans.

See Appendix B for instructions on how to locate information concerning calculating your emissions, along with resources that can be used for record keeping and reporting.

Recordkeeping requirements for your equipment

1. Required equipment records depend upon the following:
 - type of equipment;

- whether or not the equipment is partially exempt from this rule;
- whether or not the equipment has a Continuous Emissions Monitoring System (CEMS) or a Predictive Emissions Monitoring System (PEMS) installed; and
- type of fuel.

The specific records for each type of equipment are listed in 30 TAC §117.2045(a). (See Appendix A for instructions on locating the text of this rule.)

2. The easiest way to insure that you have all the necessary records is to place all records for each piece of equipment in a folder or binder.
3. The following table outlines records you must keep if your equipment is not partially exempt (non-exempt equipment). Record-keeping requirements for partially exempt equipment are outlined in a separate fact sheet, titled “Is my boiler, process heater, stationary engine, or turbine regulated by the minor source NO_x rule”. For instructions on how to order or download guidance documents from the TCEQ Web site, see Appendix B.

Recordkeeping Requirements for Non-Exempt Equipment

☑=Required

Required Records	Type of Equipment			
	Units without a CEMS or PEMS	Units with a CEMS or PEMS	Engines	Diesel or dual-fuel engines
Annual fuel usage by the unit	☑	☑	☑	☑
Hourly emissions and fuel usage OR stack exhaust flow for units complying with an emission limit enforced on a block one-hour average		☑		
Daily emissions and fuel usage OR stack exhaust flow for units with an emission limit enforced on a rolling 30-day average in lb/Btu heat input and lbs/day or tons/day		☑		
Maintenance on catalytic converter, air-fuel ratio controller, and other emissions-related control systems including the date and specific maintenance performed			☑	☑
Quarterly NO _x and CO measurements (see §117.8140(b) for specifics on measuring)			☑	☑
NO _x and CO measurements within 2 weeks of <ul style="list-style-type: none"> • Any engine maintenance that could increase NO_x emissions • O₂ sensor replacement • catalyst cleaning; or • catalyst replacement (see §117.8140(b) for specifics on measuring)			☑	☑
Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring systems	☑	☑	☑	☑
Results of performance and other testing (see §117.2035 for testing details)	☑	☑	☑	☑
Dates of operation				☑
Start and end times of operation				☑
Identification of the engine				☑
Total hours of operation for each month and for the most recent 12 consecutive months				☑

- ✓ This fact sheet contains information on a variety of logs that can be used to keep the required records and can be downloaded from our Web site at <www.sblga.info> (click on the link for “Assistance Tools for Minor Sources of NO_x”). You are not mandated to use these specific logs. You may keep the records in any way that meets the requirements

of the rule. The logs are in suggested form only and are offered as a courtesy for your use.

- The record-keeping requirements differ depending on the type of equipment and whether it is exempt from some portion of the rule or not.
- ✓ Because most of the records will apply to a specific piece of equipment, we recommend you maintain a set of file folders or a notebook for each piece of equipment. Below is an example of an organizational scheme for the data, for file folders, or for a notebook.
- ✓ You may wish to include the name of the equipment and the year on the notebook cover and spine.
- ✓ All records must be kept for at least five years and be available for inspection upon request to any representative of the TCEQ, the Environmental Protection Agency, or any local air pollution control agency having jurisdiction.

Example Notebook Tabs and File Folders

Generic Folder Title or Notebook Tab	Example Folder Title or Notebook Tab	Folder Contents or Information Stored Behind the Tab
[Unit Identification] General Information	Boiler # 1: General Info	Manufacturer's Information, Guarantees, Maintenance Contracts, etc.
[Unit Identification] Year-Testing, Maintenance, Etc.	Boiler #1: 2006-Testing, Maintenance, etc.	All records of testing, maintenance, repairs, calibrations etc. performed during the specified year
[Unit Identification] Year-Operations Logs	Boiler #1 : 2006-Operations Logs	All the logs completed in a given year

Refer to the following table and list of log forms to determine which of the logs are applicable to your specific equipment:

List of Log Forms that are available on our Web site at <www.sblga.info>:

1	Emergency Engine Operation
2	Diesel or Dual-fuel Engine Testing and Maintenance Operations
3	Daily Engine Operations
4	Annual Fuel Usage
5	Exempt School Boiler Monthly Operations
6	Total Monthly Fuel Usage for Site
7	Engine Emissions
8	Daily Emissions – Non Exempt Equipment with NO _x CEMS or PEMS – 30-day Rolling Average
9	Daily Emissions – Non Exempt Equipment with NO _x CEMS or PEMS – Block One-Hour Average
10	30-Day Rolling Averages

Record-keeping Logs for Equipment

=Required

Equipment	Logs										Additional Records	
	1	2	3	4	5	6	7	8	9	10		
Engines												
Gas or dual-fuel engines operated <u>only</u> in emergency situations.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Diesel engines meeting ALL of the following conditions: 1. operated only in emergency situations; 2. placed into service before Oct 1, 2001; and 3. not modified after Oct 1, 2001.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Diesel engines meeting ALL of the following conditions: 1. placed into service before Oct 1, 2001; 2. operated <100 hr/yr (based on a 12-month rolling average); 3. not modified, reconstructed, or relocated on or after Oct 1, 2001.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)									
Diesel engines meeting ALL of the following conditions: 1. placed into service on or after Oct 1, 2001; 2. new, modified, reconstructed, or relocated stationary engine; 3. operated <100 hr/yr in non-emergency situations, based on a 12-month rolling average; 4. meets emission standards for non-road engines* in effect at the time of installation, modification, reconstruction, or relocation.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)									
Non-exempt engines with a NO _x CEMS or PEMS			<input checked="" type="checkbox"/> (2)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (4)	<ul style="list-style-type: none"> Catalytic converter, air-fuel ratio controller, or other emissions-related maintenance, including the date and nature of corrective actions taken Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems Results of performance testing
Non-exempt engines without a NO _x CEMS or PEMS			<input checked="" type="checkbox"/> (2)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					<ul style="list-style-type: none"> Catalytic converter, air-fuel ratio controller, or other emissions-related maintenance, including the date and nature of corrective actions taken Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems Results of performance testing

Equipment	Logs										Additional Records
	1	2	3	4	5	6	7	8	9	10	
Boilers											
Exempt boiler located at an independent school district property				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Exempt boiler with a NO_x CEMS or PEMS <u>NOT</u> located at an independent school district property				<input checked="" type="checkbox"/>							
Exempt boiler without a NO_x CEMS or PEMS <u>NOT</u> located at an independent school district property				<input checked="" type="checkbox"/>							
Non-exempt boiler with a NO_x CEMS or PEMS				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3) (4)	<ul style="list-style-type: none"> • Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems • Results of performance testing
Non-exempt boiler without a NO_x CEMS or PEMS				<input checked="" type="checkbox"/>							<ul style="list-style-type: none"> • Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems • Results of performance testing
Turbines											
Non-exempt turbine with a NO_x CEMS or PEMS				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3)	<input checked="" type="checkbox"/> (3) (4)	<ul style="list-style-type: none"> • Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems • Results of performance testing
Non-exempt turbine without a NO_x CEMS or PEMS				<input checked="" type="checkbox"/>							<ul style="list-style-type: none"> • Results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, steam-to-fuel, or water-to-fuel ratio monitoring systems • Results of performance testing

- (1) Must be recorded with an elapsed run-time meter
(2) Required for diesel or dual-fuel engines only; must be recorded with an elapsed run-time meter
(3) Use Log 9 or Logs 8 and 10 depending on the averaging period required
(4) See Appendix C, Example of 30-day Rolling Average Calculation

Appendix A: How to Locate TCEQ and EPA Rules

This regulatory fact sheet contains information concerning the Minor Source rule (30 TAC §117.2000 - §117.2045) of the State of Texas' environmental rules.

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

1. Go to <www.sos.state.tx.us/tac/>.
2. Click the <[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.viewtac](http://info.sos.state.tx.us/pls/pub/readtac$ext.viewtac)> link at the bottom of the text.
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 Small Combustion Sources."
7. Click "Division 1 Boilers, Process Heaters, and Stationary Engines and Gas Turbines at Minor Sources."

You can find the text of other state environmental rules by following steps one through four and then clicking on the appropriate chapter and subsequent links.

Federal environmental rules from the U.S. Environmental Protection Agency are in Title 40 of the Code of Federal Regulations. This is commonly referred to as "40 CFR." The Code of Federal Regulations 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 guidance document.

Appendix B: How to locate compliance assistance information for the Minor Source NO_x rule

Visit the TCEQ Web page at <www.sblga.info> and click on the link titled "Assistance Tools for Minor Sources of NO_x." This Web page contains fact sheets, downloadable spreadsheets, and log forms that can help you with record keeping, reporting, emission calculations and specifications.

Appendix C: Example: 30-day Rolling Average Calculation

If your emission limit is enforced on a rolling 30-day rolling average, you must calculate your average every day, using the emissions for that day plus the previous 29 days. You may download log forms and spreadsheets from the Web page at <www.sblga.info> to calculate and track your 30-day rolling averages, along with the potential emissions from your equipment.

Example: The date is Jan. 15, 2006. The equipment is a boiler rated at 20 MMBtu/hr with an emission factor of 0.14 lbs NO_x/MMBtu. The number of hours the boiler operates each day is variable.

Equipment ID: Boiler #1

Name of person doing calculation: John Doe

Date calculation is for: 1/15/2006

Step 1. Determine your emissions for Jan. 15, 2006.

Step 2. Add together your emissions for Jan. 15, 2006, plus the previous 29 days.

Day	Date	lb/MMBtu	lbs/day or tons/day
1	1/15/2006	0.14	67.2 lbs/day
2	1/14/2006	0.14	67.2 lbs/day
3	1/13/2006	0.14	36.4 lbs/day
4	1/12/2006	0.14	67.2 lbs/day
5	1/11/2006	0.14	67.2 lbs/day
6	1/10/2006	0.14	67.2 lbs/day
7	1/9/2006	0.14	36.4 lbs/day
8	1/8/2006	0.14	28.0 lbs/day
9	1/7/2006	0.14	67.2 lbs/day
10	1/6/2006	0.14	67.2 lbs/day
11	1/5/2006	0.14	28.0 lbs/day
12	1/4/2006	0.14	67.2 lbs/day
13	1/3/2006	0.14	67.2 lbs/day
14	1/2/2006	0.14	67.2 lbs/day
15	1/1/2006	0.14	28.0 lbs/day
16	12/31/2005	0.14	28.0 lbs/day
17	12/30/2005	0.14	28.0 lbs/day
18	12/29/2005	0.14	28.0 lbs/day
19	12/28/2005	0.14	28.0 lbs/day
20	12/27/2005	0.14	28.0 lbs/day
21	12/26/2005	0.14	36.4 lbs/day
22	12/25/2005	0.14	28.0 lbs/day
23	12/24/2005	0.14	28.0 lbs/day
24	12/23/2005	0.14	36.4 lbs/day
25	12/22/2005	0.14	28.0 lbs/day
26	12/21/2005	0.14	28.0 lbs/day
27	12/20/2005	0.14	36.4 lbs/day
28	12/19/2005	0.14	36.4 lbs/day
29	12/18/2005	0.14	36.4 lbs/day
30	12/17/2005	0.14	36.4 lbs/day
Totals		4.2	1,229.2
Averages (Total/30)		0.14	43.30667

Step 3. Enter the averages in your Log.

Step 4. Repeat this calculation on Jan. 16, 2006, using the dates from Dec. 18, 2006, to Jan. 16, 2006.