

**Texas Chapter 117 - Control of Air Pollution from Nitrogen Compounds**

**SUBCHAPTER D: COMBUSTION CONTROL AT MINOR SOURCES IN OZONE NONATTAINMENT AREAS**

**DIVISION 2: DALLAS-FORT WORTH EIGHT-HOUR OZONE NONATTAINMENT AREA MINOR SOURCES**

**Adopted by TCEQ May 23, 2007 effective June 14, 2007 (7-27), submitted to EPA May 30, 2007, and approved by EPA December 3, 2008 (73 FR 73562) effective January 2, 2009 (TXd97). Amendatory language corrected January 14, 2009 (74 FR 1927) (TXd99).**

**§117.2110 is as adopted by TCEQ January 13, 2010, effective February 2, 2010 (7-30), submitted to EPA February 2, 2010, and approved by EPA May 6, 2013 (78 FR 26251) effective July 5, 2013 (TXd138) TX121 Regulations.gov docket EPA-R06-OAR-2011-0494.**

**Outline:**

**§117.2100. Applicability. 7-27, TXd97**

**§117.2103. Exemptions. 7-27, TXd97**

**§117.2110. Emission Specifications for Eight-Hour Attainment Demonstration. 7-30, TXd138**

**§117.2130. Operating Requirements. 7-27, TXd97**

**§117.2135. Monitoring, Notification, and Testing Requirements. 7-27, TXd97, TXd99**

**§117.2145. Recordkeeping and Reporting Requirements. 7-27, TXd97**

**\*\*\*\*\*end outline tx7D2d138\*\*\*\*\*t6i\*\*\***

**SUBCHAPTER D: COMBUSTION CONTROL AT MINOR SOURCES IN OZONE  
NONATTAINMENT AREAS  
DIVISION 2: DALLAS-FORT WORTH EIGHT-HOUR OZONE NONATTAINMENT AREA  
MINOR SOURCES  
§§117.2100, 117.2103, 117.2110, 117.2130, 117.2135, 117.2145**

**STATUTORY AUTHORITY**

The new sections are adopted under Texas Water Code, §5.102, concerning General Powers, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code. In addition, the sections are adopted under Texas Health and Safety Code, §382.002, concerning Policy and Purpose, which states the policy and purpose of the State of Texas and the Texas Clean Air Act; §382.011, concerning General Powers and Duties, which provides the commission with the authority to establish the level of quality to be maintained in the state's air and the authority to control the quality of the state's air; §382.012, concerning State Air Control Plan, which requires the commission to develop plans for protection of the state's air; §382.014, concerning Emission Inventory, which authorizes the commission to require submission information relating to emissions of air contaminants; §382.016, concerning Monitoring Requirements; Examination of Records, which authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; §382.017, concerning Rules, which provides the commission the authority to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; §382.021, concerning Sampling Methods and Procedures, which authorizes the commission to prescribe the sampling methods and procedures; and §382.051(d), concerning Permitting Authority of Commission Rules, which authorizes the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under Chapter 382. In addition, the new sections are adopted under federal mandates contained in 42 United States Code, §§7401 *et seq.*, which require states to adopt pollution control measures in order to reach specific air quality standards in particular areas of the state.

The adopted sections implement Texas Health and Safety Code, §§382.002, 382.011, 382.012, 382.014, 382.016, 382.017, 382.021, and 382.051(d).

**§117.2100. Applicability.**

This division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources) applies in the Dallas-Fort Worth eight-hour ozone nonattainment area to stationary, reciprocating internal combustion engines at any stationary source of nitrogen oxides (NO<sub>x</sub>) that is not a major source of NO<sub>x</sub>.

**§117.2103. Exemptions.**

This division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources) does not apply to the following stationary engines, except as specified in §§117.2130(c), 117.2135(e), and 117.2145(b) and (c) of this title (relating to Operating Requirements; Monitoring, Notification, and Testing Requirements; and Recordkeeping and Reporting Requirements):

- (1) engines with a horsepower (hp) rating of less than 50 hp;
- (2) engines used in research and testing;
- (3) engines used for purposes of performance verification and testing;
- (4) engines used solely to power other engines or gas turbines during startups;

(5) engines operated exclusively in emergency situations, except that operation for testing or maintenance purposes is allowed for up to 100 hours per year, based on a rolling 12-month average. Any new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after June 1, 2007, is ineligible for this exemption. For the purposes of this subparagraph, the terms “modification” and “reconstruction” have the meanings defined in §116.10 of this title (relating to General Definitions) and 40 Code of Federal Regulations (CFR) §60.15 (December 16, 1975), respectively, and the term “relocated” means to newly install at an account, as defined in §101.1 of this title (relating to Definitions), a used engine from anywhere outside that account;

(6) engines used in response to and during the existence of any officially declared disaster or state of emergency;

(7) engines used directly and exclusively by the owner or operator for agricultural operations necessary for the growing of crops or raising of fowl or animals;

(8) diesel engines placed into service before June 1, 2007, that:

(A) operate less than 100 hours per year, based on a rolling 12-month average;  
and

(B) have not been modified, reconstructed, or relocated on or after June 1, 2007. For the purposes of this clause, the terms “modification” and “reconstruction” have the meanings defined in §116.10 of this title and 40 CFR §60.15 (December 16, 1975), respectively, and the term “relocated” means to newly install at an account, as defined in §101.1 of this title, a used engine from anywhere outside that account; and

(9) new, modified, reconstructed, or relocated stationary diesel engines placed into service on or after June 1, 2007, that:

(A) operate less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and

(B) meet the corresponding emission standard for non-road engines listed in 40 CFR §89.112(a), Table 1 (October 23, 1998) and in effect at the time of installation, modification, reconstruction, or relocation. For the purposes of this subparagraph, the terms “modification” and “reconstruction” have the meanings defined in §116.10 of this title and 40 CFR §60.15 (December 16, 1975), respectively, and the term “relocated” means to newly install at an account, as defined in §101.1 of this title, a used engine from anywhere outside that account.

~~§117.2110. Emission Specifications for Eight-Hour Attainment Demonstration.~~

**SUBCHAPTER D: COMBUSTION CONTROL AT MINOR SOURCES IN  
OZONE NONATTAINMENT AREAS**

**DIVISION 2: DALLAS-FORT WORTH EIGHT-HOUR OZONE  
NONATTAINMENT AREA MINOR SOURCES**

**§117.2110**

**§117.2110. Emission Specifications for Eight-Hour Attainment  
Demonstration.**

(a) The owner or operator of any source subject to this division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources) shall not allow the discharge into the atmosphere emissions of nitrogen oxides (NO<sub>x</sub>) in excess of the following emission specifications.

(1) Emission specifications for stationary, gas-fired, reciprocating internal combustion engines are as follows:

(A) rich-burn engines:

(i) fired on landfill gas, 0.60 grams per horsepower-hour (g/hp-hr); and

(ii) all other rich-burn engines, 0.50 g/hp-hr; and

(B) lean-burn engines:

(i) placed into service before June 1, 2007, that have not been modified, reconstructed, or relocated on or after June 1, 2007, 0.70 g/hp-hr; and

(ii) placed into service, modified, reconstructed, or relocated on or after June 1, 2007:

(I) fired on landfill gas or other biogas, 0.60 g/hp-hr;  
and

(II) all other lean-burn engines, 0.50 g/hp-hr.

(2) The emission specification for stationary, dual-fuel, reciprocating internal combustion engines is 5.83 g/hp-hr.

(3) Emission specifications for stationary, diesel, reciprocating internal combustion engines are as follows:

(A) placed into service before March 1, 2009, that have not been modified, reconstructed, or relocated on or after March 1, 2009, the lower of 11.0 g/hp-hr or the emission rate established by testing, monitoring, manufacturer's guarantee, or manufacturer's other data; and

(B) for engines not subject to subparagraph (A) of this paragraph:

(i) with a horsepower (hp) rating of 50 hp or greater, but less than 100 hp, that are installed, modified, reconstructed, or relocated on or after March 1, 2009, 3.3 g/hp-hr;

(ii) with a horsepower rating of 100 hp or greater, but less than or equal to 750 hp, that are installed, modified, reconstructed, or relocated on or after March 1, 2009, 2.8 g/hp-hr; and

(iii) with a horsepower rating of 750 hp or greater that are installed, modified, reconstructed, or relocated on or after March 1, 2009, 4.5 g/hp-hr.

(4) As an alternative to the emission specifications in paragraphs (1) - (3) of this subsection for units with an annual capacity factor of 0.0383 or less, 0.060 pound per million British thermal units (lb/MMBtu) heat input. For units placed into service on or before December 31, 2000, the annual capacity factor as of December 31, 2000, must be used to determine eligibility for the alternative emission specification of this paragraph. For units placed into service after December 31, 2000, a 12-month rolling average must be used to determine the annual capacity factor.

(5) For the purposes of this subsection, the terms "modification" and "reconstruction" have the meanings defined in §116.10 of this title (relating to General

Definitions) and 40 Code of Federal Regulations §60.15 (December 16, 1975), respectively, and the term "relocated" means to newly install at an account, as defined in §101.1 of this title (relating to Definitions), a used engine from anywhere outside that account.

(b) The averaging time for the NO<sub>x</sub> emission specifications of subsection (a) of this section is as follows:

(1) if the unit is operated with a NO<sub>x</sub> continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) under §117.2135(c) of this title (relating to Monitoring, Notification, and Testing Requirements), either as:

(A) a rolling 30-day average period, in the units of the applicable standard;

(B) a block one-hour average, in the units of the applicable standard, or alternatively;

(C) a block one-hour average, in pounds per hour, for boilers, calculated as the product of the boiler's maximum rated capacity and its applicable limit in lb/MMBtu; or

(2) if the unit is not operated with a NO<sub>x</sub> CEMS or PEMS under §117.2135(c) of this title, a block one-hour average, in the units of the applicable standard.

(c) The maximum rated capacity used to determine the applicability of the emission specifications in subsection (a) of this section must be the greater of the following:

(1) the maximum rated capacity as of December 31, 2000; or

(2) the maximum rated capacity after December 31, 2000.

(d) A unit's classification is determined by the most specific classification applicable to the unit as of December 31, 2000. For example, a unit that is classified as a stationary gas-fired engine as of December 31, 2000, but subsequently is authorized to operate as a dual-fuel engine, must be classified as a stationary gas-fired engine for the purposes of this chapter.

(e) Changes after December 31, 2000, to a unit subject to an emission specification in subsection (a) of this section (ESAD unit) that result in increased NO<sub>x</sub> emissions from a unit not subject to an emission specification in subsection (a) of this section (non-ESAD unit), such as redirecting one or more fuel or waste streams containing chemical-bound nitrogen to an incinerator or a flare, is only allowed if:

(1) the increase in NO<sub>x</sub> emissions at the non-ESAD unit is determined using a CEMS or PEMS that meets the requirements of §117.2135(c) of this title, or through stack testing that meets the requirements of §117.2135(f) of this title; and

(2) emission credits equal to the increase in NO<sub>x</sub> emissions at the non-ESAD unit are obtained and used in accordance with §117.9800 of this title (relating to Use of Emission Credits for Compliance).

(f) A source that met the definition of major source on December 31, 2000, is always classified as a major source for purposes of this chapter. A source that did not meet the definition of major source (i.e., was a minor source, or did not yet exist) on December 31, 2000, but becomes a major source at any time after December 31, 2000, is from that time forward always classified as a major source for purposes of this chapter.

(g) The availability under subsection (a)(4) of this section of an emission specification for units with an annual capacity factor of 0.0383 or less is based on the unit's status on December 31, 2000. Reduced operation after December 31, 2000, cannot be used to qualify for a more lenient emission specification under subsection (a)(4) of this section than would otherwise apply to the unit.

(h) No person shall allow the discharge into the atmosphere from any unit subject to NO<sub>x</sub> emission specifications in subsection (a) of this section, emissions in excess of

the following, except as provided in §117.2125 of this title (relating to Alternative Case Specific Specifications):

(1) carbon monoxide (CO), 400 ppmv at 3.0% oxygen (O<sub>2</sub>), dry basis (or alternatively, 3.0 g/hp-hr for stationary internal combustion engines):

(A) on a rolling 24-hour averaging period, for units equipped with CEMS or PEMS for CO; and

(B) on a one-hour average, for units not equipped with CEMS or PEMS for CO; and

(2) for units that inject urea or ammonia into the exhaust stream for NO<sub>x</sub> control, ammonia emissions of 10 ppmv at 15% O<sub>2</sub>, dry, for gas-fired lean-burn engines; and 3.0% O<sub>2</sub>, dry, for all other units, based on:

(A) a block one-hour averaging period for units not equipped with a CEMS or PEMS for ammonia; or

(B) a rolling 24-hour averaging period for units equipped with CEMS or PEMS for ammonia.

(i) An owner or operator may use emission reduction credits as specified in §117.9800 of this title to comply with the NO<sub>x</sub> emission specifications of this section.

~~(1) the increase in NO<sub>x</sub> emissions at the non-ESAD unit is determined using a CEMS or PEMS that meets the requirements of §117.2135(c) of this title, or through stack testing that meets the requirements of §117.2135(f) of this title; and~~

~~(2) emission credits equal to the increase in NO<sub>x</sub> emissions at the non-ESAD unit are obtained and used in accordance with §117.9800 of this title (relating to Use of Emission Credits for Compliance).~~

~~(f) A source that met the definition of major source on December 31, 2000, is always classified as a major source for purposes of this chapter. A source that did not meet the definition of major source (i.e., was a minor source, or did not yet exist) on December 31, 2000, but becomes a major source at any time after December 31, 2000, is from that time forward always classified as a major source for purposes of this chapter.~~

~~(g) The availability under subsection (a)(4) of this section of an emission specification for units with an annual capacity factor of 0.0383 or less is based on the unit's status on December 31, 2000. Reduced operation after December 31, 2000, cannot be used to qualify for a more lenient emission specification under subsection (a)(4) of this section than would otherwise apply to the unit.~~

~~(h) (NOT PART OF SIP REVISION)~~

~~(i) An owner or operator may use emission reduction credits as specified in §117.9800 of this title to comply with the NO<sub>x</sub> emission specifications of this section.~~

#### **§117.2130. Operating Requirements.**

(a) The owner or operator shall operate any unit subject to the emission specifications of §117.2110 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) in compliance with those specifications.

(b) All units subject to §117.2110 of this title must be operated so as to minimize nitrogen oxides (NO<sub>x</sub>) emissions, consistent with the emission control techniques selected, over the unit's operating or load range during normal operations. Such operational requirements include the following.

(1) Each unit controlled with post-combustion control techniques must be operated such that the reducing agent injection rate is maintained to limit NO<sub>x</sub> concentrations to less than or equal to the NO<sub>x</sub> concentrations achieved at maximum rated capacity.

(2) Each stationary internal combustion engine controlled with nonselective catalytic reduction must be equipped with an automatic air-fuel ratio (AFR) controller that operates on exhaust O<sub>2</sub> or CO control and maintains AFR in the range required to meet the engine's applicable emission specifications.

(3) Each stationary internal combustion engine must be checked for proper operation according to §117.8140(b) of the title (relating to Emission Monitoring for Engines).

(c) No person shall start or operate any stationary diesel or dual-fuel engine for testing or maintenance between the hours of 6:00 a.m. and noon, except:

(1) for specific manufacturer's recommended testing requiring a run of over 18 consecutive hours;

(2) 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

(3) firewater pumps for emergency response training conducted in the months of April through October.

**§117.2135. Monitoring, Notification, and Testing Requirements.**

(a) Oxygen (O<sub>2</sub>) monitors. If the owner or operator installs an O<sub>2</sub> monitor, the criteria in §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources) should be considered the appropriate guidance for the location and calibration of the monitor.

(b) Nitrogen oxides (NO<sub>x</sub>) monitors. If the owner or operator installs a continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS), the CEMS or PEMS must meet the requirements of §117.8100(a) or (b) of this title. If a PEMS is used, the PEMS must predict the pollution emissions in the units of the applicable emission limitations of this division.

(c) Monitor installation schedule. Installation of monitors must be performed in accordance with the schedule specified in §117.9210 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources).

(d) Testing requirements. The owner or operator of any unit subject to §117.2110 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) shall comply with the following testing requirements.

(1) Each unit must be tested for NO<sub>x</sub>, carbon monoxide (CO), and O<sub>2</sub> emissions.

(2) One of the ammonia monitoring procedures specified in §117.8130 of this title (relating to Ammonia Monitoring) must be used to demonstrate compliance with the ammonia emission specification of §117.2110(h)(2) of this title for units that inject urea or ammonia into the exhaust stream for NO<sub>x</sub> control.

(3) For units not equipped with CEMS or PEMS, all testing must be conducted according to §117.8000 of this title (relating to Stack Testing Requirements). In lieu of the test methods specified in §117.8000 of this title, the owner or operator may use American Society for Testing and Materials (ASTM) D6522-00 to perform the NO<sub>x</sub>, CO, and O<sub>2</sub> testing required by this subsection on natural gas-fired reciprocating engines. If the owner or operator elects to use ASTM D6522-00 for the testing requirements, the report must contain the information specified in §117.8010 of this title (relating to Compliance Stack Test Reports).

(4) Test results must be reported in the units of the applicable emission specifications and averaging periods. If compliance testing is based on 40 Code of Federal Regulations Part 60, Appendix A reference methods, the report must contain the information specified in §117.8010 of this title.

(5) For units equipped with CEMS or PEMS, the CEMS or PEMS must be installed and operational before testing under this subsection. Verification of operational status must, at a minimum, include completion of the initial monitor certification and the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(6) Initial compliance with the emission specifications of §117.2110 of this title for units operating with CEMS or PEMS must be demonstrated after monitor certification testing using the NO<sub>x</sub> CEMS or PEMS.

(7) For units not operating with CEMS or PEMS, the following apply.

(A) Retesting as specified in paragraphs (1) - (4) of this subsection is required within 60 days after any modification that could reasonably be expected to increase the NO<sub>x</sub> emission rate.

(B) Retesting as specified in paragraphs (1) - (4) of this subsection may be conducted at the discretion of the owner or operator after any modification that could reasonably be expected to decrease the NO<sub>x</sub> emission rate, including, but not limited to, installation of post-combustion controls, low-NO<sub>x</sub> burners, low excess air operation, staged combustion (for example, overfire air), flue gas recirculation, and fuel-lean and conventional (fuel-rich) reburn.

(C) Stationary, reciprocating internal combustion engines not equipped with CEMS or PEMS must be periodically tested for NO<sub>x</sub> and CO emissions as specified in §117.8140(a) of this title (relating to Emission Monitoring for Engines).

(8) Testing must be performed in accordance with the schedule specified in §117.9210 of this title.

(9) All test reports must be submitted to the executive director for review and approval within 60 days after completion of the testing.

(10) The owner or operator of an affected unit in the Dallas-Fort Worth eight-hour ozone nonattainment area must submit written notification of any CEMS or PEMS relative accuracy test audit (RATA) or testing required under this section to the appropriate regional office and any local air pollution control agency having jurisdiction at least 15 days in advance of the date of RATA or testing.

(e) Run time meters. The owner or operator of any stationary diesel engine claimed exempt using the exemption of §117.2103(5), (8), or (9) of this title shall record the operating time with a non-resettable elapsed run time meter.

#### **§117.2145. Recordkeeping and Reporting Requirements.**

(a) Recordkeeping. The owner or operator of a unit subject to §117.2110 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) shall maintain written or electronic records of the data specified in this subsection. Such records must be kept for a period of at least five years and must be made available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction. The records must include:

(1) for each unit using a continuous emission monitoring system (CEMS) or predictive emission monitoring system (PEMS) in accordance with §117.2135(b) of this title (relating to Monitoring, Notification, and Testing Requirements) monitoring records of:

(A) hourly emissions for units complying with an emission specification enforced on a block one-hour average; and

(B) daily emissions for units complying with an emission specification enforced on a rolling 30-day average. Emissions must be recorded in units of:

(i) pounds per million British thermal units (MMBtu) heat input; and

(ii) pounds or tons per day;

(2) for each stationary internal combustion engine subject to §117.2110 of this title, records of:

(A) emissions measurements required by §117.2130(b)(3) of this title (relating to Operating Requirements); and

(B) catalytic converter, air-fuel ratio controller, or other emissions-related control system maintenance, including the date and nature of corrective actions taken;

(3) records of carbon monoxide (CO) measurements specified in §117.2130(b)(3) of this title;

(4) records of the 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; and

(5) records of the results of performance testing, including the testing conducted in accordance with §117.2135(d) of this title.

(b) Records for exempt engines. Written records of the number of hours of operation for each day's operation must be made for each engine claimed exempt under §117.2103(5), (8), or (9) of this title or §117.2130(b)(3) of this title. In addition, for each engine claimed exempt under §117.2103(5) of this title, written records must be maintained of the purpose of engine operation and, if operation was for an emergency situation, identification of the type of emergency situation and the start and end times and date(s) of the emergency situation. The records must be maintained for at least five years and must

be made available upon request to representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency having jurisdiction.

(c) Records of operation for testing and maintenance. The owner or operator of each stationary diesel or dual-fuel engine shall maintain the following records for at least five years and make them available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction:

(1) date(s) of operation;

(2) start and end times of operation;

(3) identification of the engine; and

(4) total hours of operation for each month and for the most recent 12 consecutive months.