

## **Texas Chapter 117 - Control of Air Pollution From Nitrogen Compounds**

### **SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL**

#### **DIVISION 4: EAST TEXAS COMBUSTION**

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#### **Outline:**

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## **SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL**

### **DIVISION 4: EAST TEXAS COMBUSTION**

**§§117.3300, 117.3303, 117.3310, 117.3330, 117.3335, 117.3345**

#### **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).

**§117.3300. Applicability.**

This division (relating to East Texas Combustion) applies to stationary, gas-fired reciprocating internal combustion engines at any stationary source of nitrogen oxides in the following affected counties: Anderson, Brazos, Burleson, Camp, Cass, Cherokee, Franklin, Freestone, Gregg, Grimes, Harrison, Henderson, Hill, Hopkins, Hunt, Lee, Leon, Limestone, Madison, Marion, Morris, Nacogdoches, Navarro, Panola, Rains, Robertson, Rusk, Shelby, Smith, Titus, Upshur, Van Zandt, and Wood Counties.

**§117.3303. Exemptions.**

The following stationary engines are exempt from this division (relating to East Texas Combustion), except as specified in §117.3345(b) of this title (relating to Recordkeeping and Reporting Requirements):

- (1) engines with a maximum rated horsepower (hp) capacity of less than 240 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;
- (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;

(9) dual-fuel engines; and

(10) gas-fired lean-burn engines.

**§117.3310. Emission Specifications for Eight-Hour Attainment Demonstration.**

(a) The owner or operator of any stationary, gas-fired reciprocating internal combustion engine subject to this division (relating to East Texas Combustion) shall not allow the discharge into the atmosphere emissions of nitrogen oxides (NO<sub>x</sub>) in excess of the following emission specifications:

(1) gas-fired rich-burn engines with a maximum rated capacity less than 500 horsepower (hp), 1.00 grams per horsepower-hour (g/hp-hr); and

(2) gas-fired rich-burn engines with a maximum rated capacity equal to or greater than 500 hp:

(A) fired on landfill gas, 0.60 g/hp-hr; and

(B) all other rich-burn engines, 0.50 g/hp-hr.

(b) The averaging time for determining compliance with the emission specifications in subsection (a) of this section must be 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 of subsection (a) of this section or the exemption status of an engine under §117.3303(1) of this title (relating to Exemptions) 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) An engine's classification is determined by the most specific classification applicable to the unit as of December 31, 2000. For example, an engine 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) (NOT PART OF SIP REVISION)

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

#### **§117.3330. Operating Requirements.**

(a) The owner or operator shall operate any stationary, reciprocating combustion engine subject to §117.3310 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) in compliance with the emission specifications of §117.3310 of this title.

(b) Each stationary, reciprocating combustion engine subject to §117.3310 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 engine's operating or load range during normal operations. Such operational requirements include the following.

(1) Each engine 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 engine controlled with nonselective catalytic reduction must be equipped with an automatic air-fuel ratio (AFR) controller that operates on exhaust oxygen or carbon monoxide (CO) control basis and maintains the AFR in the range required to meet the engine's applicable emission specifications.

(3) Each engine must be checked for proper operation by recorded NO<sub>x</sub> measurements according to §117.8140(b) of this title (relating to Emission Monitoring for Engines). The owner or operator of an engine subject to this paragraph is not required to perform the CO measurements under §117.8140(b) of this title. Engines equipped with a continuous emissions monitoring system or a predictive emissions monitoring system to monitor NO<sub>x</sub> are exempt from the requirements of this paragraph.

**§117.3335. Monitoring, Notification, and Testing Requirements.**

(a) Oxygen (O<sub>2</sub>) monitors. If the owner or operator installs a continuous emissions monitoring system (CEMS) to monitor O<sub>2</sub>, the CEMS must meet the requirements of §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources).

(b) Nitrogen oxides (NO<sub>x</sub>) monitors. If the owner or operator installs a CEMS or predictive emissions monitoring system (PEMS) to monitor NO<sub>x</sub>, the CEMS or PEMS must meet the requirements of §117.8100(a) or (b) of this title, as applicable.

(c) Monitor installation schedule. If the owner or operator elects to install CEMS or PEMS to monitor NO<sub>x</sub> or O<sub>2</sub> as provided in subsections (a) and (b) of this section, installation and certification of monitoring systems must be performed in accordance with the schedule specified in §117.9340 of this title (relating to Compliance Schedule for East Texas Combustion).

(d) Testing requirements. The owner or operator of any stationary, reciprocating combustion engine subject to §117.3310 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) shall comply with the following testing requirements.

(1) Each engine must be tested for NO<sub>x</sub> and O<sub>2</sub> emissions.

(2) Each engine that injects urea or ammonia into the exhaust stream for NO<sub>x</sub> control must be tested for ammonia emissions.

(3) For engines 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> and O<sub>2</sub> testing required by this subsection on natural gas-fired reciprocating internal combustion 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.

(5) For engines equipped with CEMS or PEMS, the CEMS or PEMS must be installed and operational before conducting 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) For engines operating with CEMS or PEMS, initial compliance with the emission specifications of §117.3310 of this title may be demonstrated by using the CEMS or PEMS, after monitor certification testing, in lieu of the methods specified in §117.3335(d)(3) of this title (relating to Monitoring, Notification, and Testing Requirements).

(7) For engines not operating with CEMS or PEMS, periodic testing for NO<sub>x</sub> emissions must be conducted according to §117.8140(a) of this title (relating to Emission Monitoring for Engines).

(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 or 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.

(8) Testing must be performed in accordance with the schedule specified in §117.9340 of this title.

(e) Ammonia monitoring. Each stationary, reciprocating combustion engine that injects urea or ammonia into the exhaust stream for NO<sub>x</sub> control must be monitored according to one of the ammonia monitoring procedures specified in §117.8130 of this title (relating to Ammonia Monitoring).

(f) Notification. The owner or operator of an affected stationary, reciprocating combustion engine must submit written notification of any CEMS or PEMS relative accuracy test audit (RATA) or testing required under this section, except for testing related to ammonia monitoring specified in subsection (e) of 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.

#### **§117.3345. Recordkeeping and Reporting Requirements.**

(a) Recordkeeping. The owner or operator of a stationary, reciprocating combustion engine subject to §117.3310 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 engine using a continuous emissions monitoring system (CEMS) or predictive emissions monitoring systems (PEMS) in accordance with §117.3335(a) or (b) of this title (relating to Monitoring, Notification, and Testing Requirements), monitoring records of hourly emissions for engines complying with an emission specification enforced on a block one-hour average;

(2) for each engine subject to §117.3310 of this title, records of:



(A) emissions measurements required by §117.3330(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 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;

(4) records of the results of performance testing, including the testing conducted in accordance with §117.3335(d) of this title; and

(5) records of the ammonia monitoring required by §117.3335(e) of this title, if applicable.

(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 §117.3303(5) of this title (relating to Exemptions) or §117.3330(b)(3) of this title. In addition, for each engine claimed exempt under §117.3303(5) of this title, written records must be maintained that document the purpose of the engine operation, and if operation was for an emergency situation, identify 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) Reporting. Except for the ammonia monitoring requirements of §117.3335(e) of this title, the owner or operator of an affected stationary, reciprocating combustion engine shall furnish the appropriate regional office and the Office of Compliance and Enforcement reports of all testing and monitor certifications required under §117.3335 of this title. Reports must be submitted for review and approval within 60 days after completion of the testing and must contain the information specified in

§117.8010 of this title (relating to Compliance Stack Test Reports). Testing conducted under §117.3330(b)(3) of this title is not subject to the reporting requirements of this subsection.