

**SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL
DIVISION 1: UTILITY ELECTRIC GENERATION IN
EAST AND CENTRAL TEXAS**

**§§117.3000, 117.3003, 117.3005, 117.3010, 117.3020, 117.3025, 117.3035,
117.3040, 117.3045, 117.3054, 117.3056
Effective April 19, 2012**

§117.3000. Applicability.

(a) The provisions of this division (relating to Utility Electric Generation in East and Central Texas) apply to each utility electric power boiler and stationary gas turbine (including duct burners used in turbine exhaust ducts) that:

(1) generates electric energy for compensation;

(2) is owned or operated by an electric cooperative, independent power producer, municipality, river authority, or public utility, or any of its successors;

(3) was placed into service before December 31, 1995; and

(4) is located in Atascosa, Bastrop, Bexar, Brazos, Calhoun, Cherokee, Fannin, Fayette, Freestone, Goliad, Gregg, Grimes, Harrison, Henderson, Hood, Hunt, Lamar, Limestone, Marion, McLennan, Milam, Morris, Nueces, Parker, Red River, Robertson, Rusk, Titus, Travis, Victoria, or Wharton County.

(b) The provisions of §117.3005 of this title (relating to Gas-Fired Steam Generation) also apply in Palo Pinto County.

Adopted May 23, 2007

Effective June 14, 2007

§117.3003. Exemptions.

The provisions of this division (relating to Utility Electric Generation in East and Central Texas), except as specified in §117.3040 and §117.3045 of this title (relating to Continuous Demonstration of Compliance; and Notification, Recordkeeping, and Reporting Requirements), do not apply to:

(1) utility electric power boilers or stationary gas turbines if the annual heat input does not exceed 2.2 (10¹¹) British thermal units per year, averaged over the three most recent calendar years;

(2) stationary gas turbines and auxiliary steam boilers that are:

(A) used solely to power other units during startups; or

(B) demonstrated to operate no more than an average of 10% of the hours of the year, averaged over the three most recent calendar years, and no more than 20% of the hours in a single calendar year; and

(3) each unit that generates electric energy primarily for internal use but that, averaged over the three most recent calendar years, sold less than one-third of its potential electrical output capacity to a utility power distribution system.

Adopted May 23, 2007

Effective June 14, 2007

§117.3005. Gas-Fired Steam Generation.

(a) Subsections (b), (c), and (d) of this section (emission specifications adopted by the Texas Air Control Board in 1972) apply in Fannin, Hood, and Palo Pinto Counties. This section no longer applies in Fannin and Hood Counties after the applicable final compliance date specified in §117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas).

(b) No person shall allow emissions of nitrogen oxides (NO_x), calculated as nitrogen dioxide (NO_2), from any "opposed-fired" steam generating unit of more than 600,000 pounds per hour (lb/hr) maximum continuous steam capacity to exceed 0.7 pound per million British thermal units (lb/MMBtu) heat input, maximum two-hour average, at maximum steam capacity. An "opposed-fired" steam generating unit is defined as a unit having burners installed on two opposite vertical firebox surfaces.

(c) No person shall allow emissions of NO_x , calculated as NO_2 , from any "front-fired" steam generating unit of more than 600,000 lb/hr maximum continuous steam capacity to exceed 0.5 lb/MMBtu heat input, maximum two-hour average, at maximum steam capacity. A "front-fired" steam generating unit is defined as a unit having all burners installed in a geometric array on one vertical firebox surface.

(d) No person shall allow emissions of NO_x , calculated as NO_2 , from any "tangential-fired" steam generating unit of more than 600,000 lb/hr maximum continuous steam capacity to exceed 0.25 lb/MMBtu heat input, maximum two-hour average, at maximum steam capacity. A "tangential-fired" steam generating unit is defined as a unit having burners installed on all corners of the unit at various elevations.

(e) Existing gas-fired steam generating units of more than 600,000 lb/hr, but less than 1,100,000 lb/hr, maximum continuous steam capacity are exempt from the provisions of this section, provided the total steam generated from the unit during any one calendar year does not exceed 30% of the product of the maximum continuous steam capacity of the unit times the number of hours in a year. Written records of the amount of steam generated for each day's operation must be made on a daily basis and maintained for at least three years from the date of each entry. Such records must be

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

Adopted May 23, 2007

Effective June 14, 2007

§117.3010. Emission Specifications.

In accordance with the compliance schedule in §117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas), the owner or operator of each utility electric power boiler or stationary gas turbine (including duct burners used in turbine exhaust ducts) shall:

(1) ensure that emissions of nitrogen oxides (NO_x) do not exceed the following rates, in pounds per million British thermal units heat input on an annual (calendar year) average:

(A) electric power boilers:

(i) gas-fired, 0.14; and

(ii) coal-fired, 0.165;

(B) stationary gas turbines (including duct burners used in turbine exhaust ducts):

(i) subject to Texas Utilities Code (TUC), §39.264 (except units designated in accordance with TUC, §39.264(i)), 0.14;

(ii) not subject to TUC, §39.264, 0.15 (or alternatively, 42 parts per million by volume (ppmv) NO_x, adjusted to 15% oxygen (O₂), dry basis); and

(iii) units designated in accordance with TUC, §39.264(i), 0.15 (or alternatively, 42 ppmv NO_x, adjusted to 15% O₂, dry basis); and

(2) ensure that for units that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions do not exceed 10 ppmv at 3.0% O₂, dry, for boilers and 15% O₂, dry, for stationary gas turbines (including duct burners used in turbine exhaust ducts) from any unit subject to the NO_x emission specifications in paragraph (1) of this section, based on:

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

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

Adopted May 23, 2007

Effective June 14, 2007

§117.3020. System Cap.

(a) An owner or operator may achieve compliance with the nitrogen oxides (NO_x) emission specifications of §117.3010 of this title (relating to Emission Specifications) by achieving equivalent NO_x emission reductions obtained by compliance with a system cap emission limitation in accordance with the requirements of this section.

(b) Each unit within an electric power generating system, as defined in §117.10 of this title (relating to Definitions), that would otherwise be subject to the NO_x emission specifications of §117.3010 of this title must be included in the system cap.

(c) The annual average emission cap must be calculated using the following equation.

Figure: 30 TAC §117.3020(c) (No change)

$$Cap_{annual} = \sum_{i=1}^N \frac{(H_i \times R_i)}{2000}$$

Where:

Cap_{annual} = the NO_x annual average emission cap in tons per year;

i = each unit in the electric power generating system;

N = the total number of units in the emission cap;

H_i = the average of the annual heat input for each unit in the emission cap, in million British

thermal units per year, as certified to the executive director, for 1996, 1997, and 1998;

and

R_i = the emission specification of §117.3010 of this title.

(d) The NO_x emissions monitoring required by §117.3040 of this title (relating to Continuous Demonstration of Compliance) for each unit in the system cap must be used to demonstrate continuous compliance with the system cap.

(e) For each operating unit, the owner or operator shall use one of the following methods to provide substitute emissions compliance data during periods when the NO_x monitor is off-line:

- (1) if the NO_x monitor is a continuous emissions monitoring system (CEMS):
- (A) subject to 40 Code of Federal Regulations (CFR) Part 75, use the missing data procedures specified in 40 CFR Part 75, Subpart D (Missing Data Substitution Procedures); or
 - (B) subject to 40 CFR Part 75, Appendix E, use the missing data procedures specified in 40 CFR Part 75, Appendix E, §2.5 (Missing Data Procedures);
- (2) use Appendix E monitoring in accordance with §117.3040(e) of this title;
- (3) if the NO_x monitor is a predictive emissions monitoring system (PEMS):
- (A) use the methods specified in 40 CFR Part 75, Subpart D; or
 - (B) use calculations in accordance with §117.8110(b) of this title (relating to Emission Monitoring System Requirements for Utility Electric Generation Sources); or
- (4) use the maximum emission rate as measured by the testing conducted in accordance with §117.3035(d) of this title (relating to Initial Demonstration of Compliance).
- (f) The owner or operator of any unit subject to a system cap shall maintain daily records indicating the NO_x emissions and fuel usage from each unit and summations of total NO_x emissions and fuel usage for all units under the system cap on a daily basis. Records must also be retained in accordance with §117.3045 of this title (relating to Notification, Recordkeeping, and Reporting Requirements).
- (g) The owner or operator of any unit subject to a system cap shall submit annual reports for the monitoring systems in accordance with §117.3045 of this title. The owner or operator shall also report any exceedance of the system cap emission limit in the annual report and shall include an analysis of the cause for the exceedance with appropriate data to demonstrate the amount of emissions in excess of the applicable limit and the necessary corrective actions taken by the company to assure future compliance.
- (h) The owner or operator of any unit subject to a system cap shall demonstrate initial compliance with the system cap in accordance with the schedule specified in

§117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas).

(i) A unit that is permanently retired or decommissioned and rendered inoperable may be included in the system cap emission limit, provided that the permanent shutdown occurred on or after January 1, 1999. The system cap emission limit is calculated in accordance with subsection (b) of this section.

(j) Emission reductions from shutdowns or curtailments that have been used for netting or offset purposes under the requirements of Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) may not be included in the baseline for establishing the cap.

(k) For the purposes of determining compliance with the system cap emission limit, the contribution of each affected unit that is operating during a startup, shutdown, or emissions event as defined in §101.1 of this title (relating to Definitions) must be calculated from the NO_x emission rate measured by the NO_x monitor, if operating properly. If the NO_x monitor is not operating properly, the substitute data procedures identified in subsection (e) of this section must be used. If neither the NO_x monitor nor the substitute data procedure are operating properly, the owner or operator shall use the maximum daily rate measured during the initial demonstration of compliance, unless the owner or operator provides data demonstrating to the satisfaction of the executive director and United States Environmental Protection Agency that actual emissions were less than maximum emissions during such periods.

(l) An owner or operator of a source of NO_x in any of the east and central Texas attainment counties listed in §117.3000(a)(4) of this title (relating to Applicability) who is participating in the system cap under this section (relating to System Cap) may exceed their system cap provided that the owner or operator is complying with the requirements of Chapter 101, Subchapter H, Division 1 or 4 of this title (relating to Emission Credit Banking and Trading; and Discrete Emission Credit Banking and Trading).

Adopted March 28, 2012

Effective April 19, 2012

§117.3025. Alternative Case Specific Specifications.

(a) Where a person can demonstrate that an affected unit cannot attain the ammonia specification of §117.3010(2) of this title (relating to Emission Specifications), the executive director may approve emission specifications different from the ammonia specification in §117.3010(2) of this title for that unit. The executive director:

(1) shall consider on a case-by-case basis the technological and economic circumstances of the individual unit;

(2) shall determine that such specifications are the result of the lowest emission limitation the unit is capable of meeting after the application of controls to meet the nitrogen oxides emission specifications of §117.3010 of this title; and

(3) in determining whether to approve alternative emission specifications, may take into consideration the ability of the plant where the unit is located to meet emission specifications through system-wide averaging at maximum capacity.

(b) Any owner or operator affected by the executive director's decision to deny an alternative case specific emission specification may file a motion to overturn the executive director's decision. The requirements of §50.139 of this title (relating to Motion to Overturn Executive Director's Decision) apply.

Adopted May 23, 2007

Effective June 14, 2007

§117.3035. Initial Demonstration of Compliance.

(a) The owner or operator of all units that are subject to the emission specifications of §117.3010 of this title (relating to Emission Specifications) shall test the units as follows.

(1) The units must be tested for nitrogen oxides (NO_x), carbon monoxide, and oxygen emissions.

(2) Units that inject urea or ammonia into the exhaust stream for NO_x control must be tested for ammonia emissions.

(3) Testing must be performed in accordance with the schedule specified in §117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas).

(b) The tests required by subsection (a) of this section must be used for determination of initial compliance with the emission specifications of this division (relating to Utility Electric Generation in East and Central Texas). 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 (relating to Compliance Stack Test Reports).

(c) Continuous emissions monitoring systems (CEMS) or predictive emissions monitoring systems (PEMS) required by §117.3040 of this title (relating to Continuous Demonstration of Compliance) must be installed and operational before testing under subsection (a) of this section. 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.

(d) Initial compliance with the emission specifications of this division for units operating with CEMS or PEMS in accordance with §117.3040 of this title must be demonstrated after monitor certification testing using the NO_x CEMS or PEMS as follows. To comply with the NO_x emission specification in pounds per million British thermal units on an annual average, NO_x emissions from a unit are monitored for each unit operating day in a calendar year, and the annual average emission rate is used to determine compliance with the NO_x emission specification. The annual average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during a calendar year.

Adopted May 23, 2007

Effective June 14, 2007

§117.3040. Continuous Demonstration of Compliance.

(a) Nitrogen oxides (NO_x) monitoring. The owner or operator of each unit subject to the emission specifications of this division (relating to Utility Electric Generation in East and Central Texas) shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS), predictive emissions monitoring system (PEMS), or other system specified in this section to measure NO_x on an individual basis.

(b) Carbon monoxide (CO) monitoring. If the owner or operator chooses to monitor CO exhaust emissions from a unit subject to the emission specifications of this division, the methods specified in §117.8120 of this title (relating to Carbon Monoxide (CO) Monitoring) should be considered appropriate guidance for determining CO emissions. (c) Ammonia monitoring. For units that inject urea or ammonia into the exhaust stream for NO_x control, 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 §117.3010(2) of this title (relating to Emission Specifications).

(d) CEMS requirements.

(1) Any CEMS required by this section must be installed, calibrated, maintained, and operated in accordance with 40 Code of Federal Regulations (CFR) Part 75 or Part 60, as applicable.

(2) One CEMS may be shared among units, provided:

(A) the exhaust stream of each unit is analyzed separately; and

(B) the CEMS meets the applicable certification requirements of paragraph (1) of this subsection for each exhaust stream.

(3) As an alternative to paragraph (2) of this subsection, for units that are included in a system cap under §117.3020 of this title (relating to System Cap):

(A) all bypass stacks must be monitored in order to quantify emissions directed through the bypass stack;

(B) one CEMS may be shared among units, provided:

(i) the exhaust stream of each stack is analyzed separately;
and

(ii) the CEMS meets the certification requirements of paragraph (1) of this subsection for each stack while the CEMS is operating in the time-shared mode; and

(C) exhaust streams of units that vent to a common stack do not need to be analyzed separately.

(e) Acid rain peaking units. The owner or operator of each peaking unit as defined in 40 CFR §72.2, may:

(1) monitor operating parameters for each unit in accordance with 40 CFR Part 75, Appendix E, §1.1 or §1.2 and calculate NO_x emission rates based on those procedures; or

(2) use CEMS or PEMS in accordance with this section to monitor NO_x emission rates.

(f) PEMS requirements. The owner or operator of any PEMS used to meet a pollutant monitoring requirement of this section shall comply with the following. The required PEMS and fuel flow meters must be used to demonstrate continuous compliance with the emission specifications of §117.3010 of this title.

(1) The PEMS must predict the pollutant emissions in the units of the applicable emission specifications of this division.

(2) The PEMS must meet the requirements of §117.8110(b) of this title (relating to Emission Monitoring System Requirements for Utility Electric Generation Sources).

(g) Gas turbine monitoring. The owner or operator of each stationary gas turbine subject to the emission specifications of §117.3010 of this title, instead of monitoring emissions in accordance with the monitoring requirements of 40 CFR Part 75, may comply with the following monitoring requirements:

(1) for stationary gas turbines rated less than 30 megawatt (MW) or peaking gas turbines (as defined in §117.10 of this title (relating to Definitions)) that use steam or water injection to comply with the emission specification of §117.3010(1)(B) of this title:

(A) install, calibrate, maintain, and operate a CEMS or PEMS in compliance with this section; or

(B) for units that are not included in a system cap under §117.3020 of this title, install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the average hourly fuel and steam or water consumption. The system must be accurate to within $\pm 5.0\%$. The steam-to-fuel or water-to-fuel ratio monitoring data must be used for demonstrating continuous compliance with the emission specification of §117.3010(1)(B) of this title; and

(2) for gas turbines not subject to paragraph (1) of this subsection, install, calibrate, maintain, and operate a CEMS or PEMS in compliance with this section.

(h) Totalizing fuel flow meters. The owner or operator of units listed in this subsection shall install, calibrate, maintain, and operate totalizing fuel flow meters to individually and continuously measure the gas and liquid fuel usage. A computer that collects, sums, and stores electronic data from continuous fuel flow meters is an acceptable totalizer. The units are:

(1) any unit subject to the emission specifications of this division;

(2) any stationary gas turbine with an MW rating greater than or equal to 1.0 MW operated more than an average of 10% of the hours of the year, averaged over the three most recent calendar years, or more than 20% of the hours in a single calendar year; and

(3) any unit claimed exempt from the emission specifications of this division using the exemption of §117.3003(1) of this title (relating to Exemptions).

(i) Run time meters. The owner or operator of any stationary gas turbine using the exemption of §117.3003(2) of this title shall record the operating time with an elapsed run time meter approved by the executive director.

(j) Loss of exemption. The owner or operator of any unit claimed exempt from the emission specifications of this division using the exemptions of §117.3003 of this title, shall notify the executive director within seven days if the applicable limit is exceeded.

(1) If the limit is exceeded, the exemption from the emission specifications of §117.3010 of this title is permanently withdrawn.

(2) Within 90 days after loss of the exemption, the owner or operator shall submit a compliance plan detailing a plan to meet the applicable compliance limit as soon as possible, but no later than 24 months after exceeding the limit. The plan must include a schedule of increments of progress for the installation of the required control equipment.

(3) The schedule is subject to the review and approval of the executive director.

(k) Data used for compliance. After the initial demonstration of compliance required by §117.3035 of this title (relating to Initial Demonstration of Compliance) the methods required in this section must be used to determine compliance with the emission specifications of this division. Compliance with the emission specifications may also be determined at the discretion of the executive director using any commission compliance method.

(l) Enforcement of NO_x limits. No unit subject to §117.3010 of this title may be operated at an emission rate higher than that allowed by the emission specifications of §117.3010 of this title.

Adopted May 23, 2007

Effective June 14, 2007

§117.3045. Notification, Recordkeeping, and Reporting Requirements.

(a) Startup and shutdown records. For units subject to the startup and/or shutdown provisions of §101.222 of this title (relating to Demonstrations), hourly records must be made of startup and/or shutdown events and maintained for a period of at least two years. Records must be available for inspection by the executive director, United States Environmental Protection Agency, and any local air pollution control agency having jurisdiction upon request. These records must include, but are not limited to: type of fuel burned; quantity of each type fuel burned; gross and net energy production in megawatt-hours (MW-hr); and the date, time, and duration of the event.

(b) Notification. The owner or operator of a unit subject to the emission specifications of this division (relating to Utility Electric Generation in East and Central Texas) shall submit notification to the executive director as follows:

(1) verbal notification of the date of any initial demonstration of compliance testing conducted under §117.3035 of this title (relating to Initial Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed; and

(2) verbal notification of the date of any continuous emissions monitoring systems (CEMS) or predictive emissions monitoring systems (PEMS) performance evaluation conducted under §117.3040 of this title (relating to Continuous Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed.

(c) Reporting of test results. The owner or operator of an affected unit shall furnish the executive director and any local air pollution control agency having jurisdiction a copy of any initial demonstration of compliance testing conducted under §117.3035 of this title or any CEMS or PEMS performance evaluation conducted under §117.3040 of this title:

(1) within 60 days after completion of such testing or evaluation; and

(2) not later than the appropriate compliance schedule specified in §117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas).

(d) Annual reports. The owner or operator of a unit required to install a CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring system under §117.3040 of this title shall report in writing to the executive director on an annual basis any exceedance of the applicable emission specifications in this division and the monitoring system performance. All reports must be postmarked or received by January 31 following the end of each calendar year. Written reports must include the following information:

(1) the magnitude of excess emissions computed in accordance with 40 Code of Federal Regulations §60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the unit operating time during the reporting period. For stationary gas turbines using steam-to-fuel or water-to-fuel ratio monitoring to demonstrate compliance in accordance with §117.3040 of this title, excess emissions are computed as each one-hour period that the hourly steam-to-fuel or water-to-fuel ratio is less than the ratio determined to result in compliance during the initial demonstration of compliance test required by §117.3035 of this title;

(2) specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected unit. The nature and cause

of any malfunction (if known) and the corrective action taken or preventative measures adopted;

(3) the date and time identifying each period that the continuous monitoring system was inoperative, except for zero and span checks and the nature of the system repairs or adjustments;

(4) when no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and

(5) if the total duration of excess emissions for the reporting period is less than 1.0% of the total unit operating time for the reporting period and the CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring system downtime for the reporting period is less than 5.0% of the total unit operating time for the reporting period, only a summary report form (as outlined in the latest edition of the commission's *Guidance for Preparation of Summary, Excess Emission, and Continuous Monitoring System Reports*) must be submitted, unless otherwise requested by the executive director. If the total duration of excess emissions for the reporting period is greater than or equal to 1.0% of the total operating time for the reporting period or the CEMS or steam-to-fuel or water-to-fuel ratio monitoring system downtime for the reporting period is greater than or equal to 5.0% of the total operating time for the reporting period, a summary report and an excess emission report must both be submitted.

(e) Recordkeeping. The owner or operator of a unit subject to the requirements of this division shall maintain records of the data specified in this subsection. Records must be kept for a period of at least five years and made available for inspection by the executive director, United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction upon request. Operating records for each unit must be recorded and maintained at a frequency equal to the applicable emission specification averaging period, or for units claimed exempt from the emission specifications based on low annual capacity factor, monthly. Records must include:

(1) emission rates in units of the applicable standards;

(2) gross energy production in MW-hr (not applicable to auxiliary steam boilers);

(3) quantity and type of fuel burned;

(4) the injection rate of reactant chemicals (if applicable); and

(5) emission monitoring data in accordance with §117.3040 of this title, including:

(A) the date, time, and duration of any malfunction in the operation of the monitoring system, except for zero and span checks, if applicable, and a description of system repairs and adjustments undertaken during each period;

(B) the results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, or operating parameter monitoring systems; and

(C) actual emissions or operating parameter measurements, as applicable;

(6) the results of performance testing, including initial demonstration of compliance testing conducted in accordance with §117.3035 of this title; and

(7) records of hours of operation.

Adopted May 23, 2007

Effective June 14, 2007

§117.3054. Final Control Plan Procedures.

(a) The owner or operator of units listed in §117.3000 of this title (relating to Applicability) shall submit a final control report to show compliance with the requirements of §117.3010 of this title (relating to Emission Specifications). The report must include:

(1) the section under which nitrogen oxides (NO_x) compliance is being established for the units within the electric generating system, either:

(A) §117.3010 of this title; or

(B) §117.3020 of this title (relating to System Cap);

(2) the methods of NO_x control for each unit;

(3) the emissions measured by testing required in §117.3035 of this title (relating to Initial Demonstration of Compliance);

(4) the submittal date, and whether sent to the Austin or the regional office (or both), of any compliance stack test report or relative accuracy test audit report required by §117.3035 of this title that is not being submitted concurrently with the final compliance report; and

(5) the specific rule citation for any unit with a claimed exemption from the emission specifications of §117.3010 of this title.

(b) In addition to the requirements of subsection (a) of this section, the owner or operator of each source complying with §117.3020 of this title shall submit:

(1) the calculations used to calculate the annual average system cap allowable emission rate;

(2) a list containing, for each unit in the cap:

(A) the average annual heat input H_i specified in §117.3020(c) of this title;

(B) the method of monitoring emissions; and

(C) the method of providing substitute emissions data when the NO_x monitoring system is not providing valid data; and

(3) an explanation of the basis of the value of H_i .

(c) The report must be submitted by the applicable date specified for final control plans in §117.9300 of this title (relating to Compliance Schedule for Utility Electric Generation in East and Central Texas). The plan must be updated with any emission compliance measurements submitted for units using a continuous emissions monitoring system or predictive emissions monitoring system and complying with the system cap annual average emission limit, according to the applicable schedule given in §117.9300 of this title.

Adopted May 23, 2007

Effective June 14, 2007

§117.3056. Revision of Final Control Plan.

A revised final control plan may be submitted by the owner or operator, along with any required permit applications. Such a plan must adhere to the emission specifications and the final compliance dates of this division (relating to Utility Electric Generation in East and Central Texas). The revision of the final control plan is subject to the review and approval of the executive director.

Adopted May 23, 2007

Effective June 14, 2007

SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL
DIVISION 2: CEMENT KILNS
§§117.3100, 117.3101, 117.3103, 117.3110, 117.3120, 117.3123, 117.3125,
117.3140, 117.3142, 117.3145
Effective June 14, 2007

§117.3100. Applicability.

This division (relating to Cement Kilns) applies to each portland cement kiln in Bexar, Comal, Ellis, Hays, and McLennan Counties.

Adopted May 23, 2007

Effective June 14, 2007

§117.3101. Cement Kiln Definitions.

Unless specifically defined in the Texas Clean Air Act (TCAA) or in the rules of the commission, the terms used by the commission have the meanings commonly used in the field of air pollution control. In addition to the terms that are defined by the TCAA, the following terms, when used in this division (relating to Cement Kilns), have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 117.10 of this title (relating to Definitions).

(1) **Clinker**--The product of a portland cement kiln from which finished cement is manufactured by milling and grinding.

(2) **Indirect-firing system**--A system that reduces the amount of primary air used in a cement kiln by:

(A) separating the powdered fuel from the air stream that carries the fuel from the drying/milling equipment;

(B) storing the fuel briefly; and

(C) using an independent, significantly smaller stream of hot primary air to blow the fuel to the burner.

(3) **Long dry kiln**--A kiln that employs no preheating of the dry feed. The inlet feed to the kiln is dry.

(4) **Long wet kiln**--A kiln that employs no preheating of the dry feed. The inlet feed to the kiln is a slurry.

(5) **Low-NO_x burner**--Either of the following:

(A) for long wet kilns, combustion equipment designed to reduce flame turbulence, delay fuel/air mixing, and establish fuel-rich zones for initial combustion; or

(B) a type of cement kiln burner that results in decreasing nitrogen oxides emissions and that has an indirect-firing system and a series of channels or orifices that:

(i) allow for the adjustment of the volume, velocity, pressure, and direction of the air carrying the fuel (known as primary air) and the combustion air (known as secondary air) into the kiln; and

(ii) impart high momentum and turbulence to the fuel stream to facilitate mixing of the fuel and secondary air.

(6) **Low-NO_x precalciner**--A process in which a portion of the fuel is injected near the raw material feed end of a preheater or precalciner kiln, resulting in a reducing atmosphere in the preheater or precalciner.

(7) **Mid-kiln firing**--Secondary combustion in long dry or long wet kilns by injecting solid fuel at (or to) an intermediate point in the kiln using a specially-designed feed injection mechanism for the purpose of decreasing nitrogen oxides emissions through:

(A) burning part of the fuel at a lower temperature; and

(B) reducing conditions at the solid fuel injection point that may destroy some of the nitrogen oxides formed upstream in the kiln burning zone.

(8) **Portland cement**--A hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, usually containing one or more of the forms of calcium sulfate as an interground addition.

(9) **Portland cement kiln**--A system, including any solid, gaseous, or liquid fuel combustion equipment, used to calcine and fuse raw materials, including limestone and clay, to produce portland cement clinker.

(10) **Precalciner kiln**--A kiln where the feed to the kiln system is preheated in cyclone chambers and utilizes a second burner to calcine material in a separate vessel attached to the preheater before the final fusion in a kiln that forms clinker.

(11) **Preheater kiln**--A kiln where the feed to the kiln system is preheated in cyclone chambers before the final fusion in a kiln that forms clinker.

(12) **Secondary combustion**--A system that employs a second combustion point in addition to the primary flame. This definition includes mid-kiln firing in long dry and long wet kilns, and also additional combustion at the raw material feed end of the kiln in preheater-precalciner kilns.

Adopted May 23, 2007

Effective June 14, 2007

§117.3103. Exemptions.

(a) Portland cement kilns exempted from the provisions of this division (relating to Cement Kilns), include any portland cement kiln placed into service on or after December 31, 1999, except as specified in §§117.3110, 117.3120, and 117.3123 of this title (relating to Emission Specifications; Source Cap; and Dallas-Fort Worth Eight-Hour Ozone Attainment Demonstration Control Requirements).

(b) Any account in Ellis County with no portland cement kilns in operation prior to January 1, 2001, is exempt from §117.3123 of this title.

(c) After the compliance date specified in §117.9320(c) of this title (relating to Compliance Schedule for Cement Kilns), portland cement kilns that are subject to §117.3123 of this title are exempt from §117.3110 and §117.3120 of this title between March 1 and October 31 of each calendar year.

Adopted May 23, 2007

Effective June 14, 2007

§117.3110. Emission Specifications.

(a) In accordance with the compliance schedule in §117.9320 of this title (relating to Compliance Schedule for Cement Kilns), the owner or operator of each portland cement kiln shall ensure that nitrogen oxides (NO_x) emissions do not exceed the following rates on a 30-day rolling average. For the purposes of this section, the 30-day rolling average is calculated as the total of all the hourly emissions data (in pounds) that fuel was combusted in a cement kiln in the preceding 30 consecutive days, divided by the total number of tons of clinker produced in that kiln during the same 30-day period:

(1) for each long wet kiln:

(A) in Bexar, Comal, Hays, and McLennan Counties, 6.0 pounds per ton (lb/ton) of clinker produced; and

(B) in Ellis County, 4.0 lb/ton of clinker produced;

(2) for each long dry kiln, 5.1 lb/ton of clinker produced;

(3) for each preheater kiln, 3.8 lb/ton of clinker produced; and

(4) for each preheater-precalciner or precalciner kiln, 2.8 lb/ton of clinker produced.

(b) If there are multiple cement kilns at the same account, the owner or operator may choose to comply with the emission specifications of subsection (a) of this section on the basis of a weighted average for the cement kilns at the account that are subject to the same specification. Each owner or operator choosing this option shall submit written notification of this choice to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction before the appropriate compliance date in §117.9320 of this title.

(c) Each long wet or long dry kiln for which the following controls are installed and operated during kiln operation is not required to meet the NO_x emission specifications of subsection (a) of this section, provided that each owner or operator choosing this option submits written notification of this choice to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction before the appropriate compliance date in §117.9320 of this title:

(1) a low-NO_x burner and either:

(A) mid-kiln firing; or

(B) some other form of secondary combustion achieving equivalent levels of NO_x reductions; or alternatively;

(2) other additions or changes to the kiln system achieving at least a 30% reduction in NO_x emissions, provided the additions or changes are approved by the executive director with concurrence from the United States Environmental Protection Agency.

(d) Each preheater or precalciner kiln for which either a low-NO_x burner or a low-NO_x precalciner is installed and operated during kiln operation is not required to meet the NO_x emission specifications of subsection (a) of this section. Each owner or operator choosing this option shall submit written notification of this choice to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction before the appropriate compliance date in §117.9320 of this title.

(e) An owner or operator may use §117.9800 of this title (relating to Use of Emission Credits for Compliance) to meet the NO_x emission control requirements of this section, in whole or in part.

Adopted May 23, 2007

Effective June 14, 2007

§117.3120. Source Cap.

(a) As an alternative to complying with the requirements of §117.3110 of this title (relating to Emission Specifications) in Bexar, Comal, Ellis, Hays, and McLennan Counties, an owner or operator may reduce total nitrogen oxides (NO_x) emissions (in pounds per day (ppd)) from all cement kilns at the account (including any cement kilns placed into service on or after December 31, 1999) to at least 30% less than the total NO_x emissions (in ppd) from all cement kilns in the account's 1996 emissions inventory (EI), on a 90-day rolling average basis. For the purposes of this section, the 90-day rolling average is calculated as the total of all the hourly emissions data for the preceding 90 days. For the calendar year that includes the appropriate compliance date in §117.9320 of this title (relating to Compliance Schedule for Cement Kilns), only hourly emissions data on or after that compliance date is included, such that the first 90-day period ends 90 days after the appropriate compliance date in §117.9320 of this title. A 90-day rolling average emission cap must be calculated using the following equation.

$$\text{Cap} = 0.7 \sum_{i=1}^N R_i$$

Where:

- Cap = 90-day rolling average NO_x emission cap, in ppd;
- i = each cement kiln at a single account;
- N = the total number of cement kilns at the account; and
- R_i = the kiln's ozone season daily NO_x emission rate (in ppd) reported in the account's 1996 EI.

(b) To qualify for the source cap option available under this section, the owner or operator shall submit an initial control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction that demonstrates that the overall reduction of NO_x emissions from all cement kilns at the account will be at least 30% from the 1996 baseline EI on a 90-day rolling average basis. The plan must be submitted no later than December 31 of the year preceding the appropriate compliance date in §117.9320 of this title. Each control plan must be approved by the executive director before the owner or operator may use the source cap available under this section for compliance. At a minimum, the control plan must

include the emission point number (EPN), facility identification number (FIN), and 1996 baseline EI NO_x emissions (in ppd) from each cement kiln at the account; a description of the control measures that have been or will be implemented at each cement kiln; and an explanation of the recordkeeping procedure and calculations that will be used to demonstrate compliance.

(c) Beginning on March 31 of the year following the appropriate compliance date in §117.9320 of this title, the owner or operator shall submit an annual report no later than March 31 of each year to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction that demonstrates that the overall reduction of NO_x emissions from all cement kilns at the account is at least 30% from the 1996 baseline EI on a 90-day rolling average basis. At a minimum, the report must include the EPN, FIN, and each 90-day rolling average NO_x emissions (in ppd) during the preceding calendar year for the cement kilns at the account.

(d) All representations in control plans and annual reports become enforceable conditions. The owner or operator shall not vary from such representations if the variation will cause a change in the identity of the specific cement kilns subject to this section or the method of control of emissions unless the owner or operator submits a revised control plan to the executive director, the appropriate regional office, and any local air pollution control program with jurisdiction no later than 30 days after the change. All control plans and reports must demonstrate that the total NO_x emissions (in ppd) from all cement kilns at the account (including any cement kilns placed into service on or after December 31, 1999) are being reduced to at least 30% less than the total NO_x emissions (in ppd) from all cement kilns in the account's 1996 EI on a 90-day rolling average basis.

(e) The NO_x emissions monitoring required by §117.3140 of this title (relating to Continuous Demonstration of Compliance) for each cement kiln in the source cap must be used to demonstrate continuous compliance with the source cap.

(f) An owner or operator may use §117.9800 of this title (relating to Use of Emission Credits for Compliance) to meet the NO_x emission control requirements of this section, in whole or in part.

Adopted May 23, 2007

Effective June 14, 2007

§117.3123. Dallas-Fort Worth Eight-Hour Ozone Attainment Demonstration Control Requirements.

(a) In accordance with the compliance schedule in §117.9320(c) of this title (relating to Compliance Schedule for Cement Kilns), the owner or operator of any portland cement kiln located in Ellis County shall not allow the total nitrogen oxides (NO_x) emissions from all cement kilns located at the account to exceed the source cap

limitation determined according to subsection (b) of this section. The source cap limitation of this section only applies from March 1 through October 31 of each calendar year. Compliance with the 30-day rolling average cap must be demonstrated beginning on March 31 of each calendar year.

(b) The NO_x source cap for an account subject to this section must be calculated according to the following equation.

$$\text{Cap}_{8\text{hour}} = \frac{(N_W \times K_W) + (N_D \times K_D)}{2000 \frac{\text{pounds}}{\text{ton}} \times 365 \frac{\text{days}}{\text{year}}}$$

Where:

- Cap_{8hour} = total allowable NO_x emissions from all cement kilns located at an account, tons per day, 30-day rolling average basis;
- K_D = 1.7 pounds NO_x per ton of clinker for dry preheater-precalciner or precalciner kilns;
- K_W = 3.4 pounds NO_x per ton of clinker for long wet kilns;
- N_D = the average annual production in tons of clinker plus one standard deviation for the calendar years 2003, 2004, and 2005, as reported to the commission's Industrial Emissions Assessment Section, from all dry preheater-precalciner or precalciner kilns located at the account; and
- N_W = the average annual production in tons of clinker plus one standard deviation for the calendar years 2003, 2004, and 2005, as reported to the commission's Industrial Emissions Assessment Section, from all long wet kilns located at the account.

(c) The monitoring required by §117.3142 of this title (relating to Emission Testing and Monitoring for Eight-Hour Attainment Demonstration) for each cement kiln subject to this section must be used to demonstrate continuous compliance with the source cap requirements of this section. Compliance with the source cap must be demonstrated on a 30-day rolling average basis, calculated according to §117.3142 of this title.

(d) For any portland cement kiln not operational prior to calendar year 2006 and that is located at an account subject to this section, the following requirements apply.

(1) The cement kiln is subject to the source cap of this section but must not be included in the source cap calculation in subsection (b) of this section.

(2) The requirements of §117.3142 of this title and §117.3145 of this title (relating to Notification, Recordkeeping, and Reporting Requirements) apply.

(3) The NO_x emissions from the kiln must be included in the calculation of 30-day rolling average NO_x emissions according to §117.3142 of this title for compliance with the source cap in subsection (b) of this section.

(e) The owner or operator of each portland cement kiln located in Ellis County shall submit a control plan to the Office of Compliance and Enforcement, the appropriate regional office, and the Chief Engineer's Office, for compliance with the source cap in subsection (b) of this section. The plan must be submitted according to the compliance schedule in §117.9320(c) of this title.

(1) At a minimum, the control plan must include:

(A) the emission point number for each kiln at the account;

(B) the facility identification number for each kiln at the account;

(C) the source cap for the account calculated according to the equation in subsection (b) of this section; and

(D) a description of the control measures that have been or will be implemented for each cement kiln for compliance with the source cap.

(2) A revised control plan may be submitted by the owner or operator, along with any required permit applications. Such a plan must adhere to the requirements of this division (relating to Cement Kilns).

(f) For any kiln that injects urea or ammonia for NO_x control, the owner or operator shall not allow ammonia emissions in excess of 10 parts per million by volume at 7.0% oxygen, dry basis, on a 24-hour rolling average basis.

(g) An owner or operator may use §117.9800 of this title (relating to Use of Emission Credits for Compliance) to meet the NO_x emission control requirements of this section, in whole or in part.

Adopted May 23, 2007

Effective June 14, 2007

§117.3125. Alternative Case Specific Specifications.

(a) Where an owner or operator can demonstrate that an affected portland cement kiln cannot attain the ammonia emission specification in §117.3123(f) of this title (relating to Dallas-Fort Worth Eight-Hour Ozone Attainment Demonstration

Control Requirements), the executive director may approve an emission specification different from §117.3123(f) of this title for that unit. The executive director:

(1) shall consider on a case-by-case basis the technological and economic circumstances of the individual portland cement kiln;

(2) shall determine that such specifications are the result of the lowest ammonia emission specification the unit is capable of meeting after the application of controls to meet the nitrogen oxides emission source cap of §117.3123 of this title; and

(3) in determining whether to approve alternative ammonia emission specifications, may take into consideration the ability of the plant where the unit is located to meet emission specifications through plant-wide averaging at maximum capacity.

(b) Any owner or operator affected by the executive director's decision to deny an alternative case specific emission specification may file a motion to overturn the executive director's decision. The requirements of §50.139 of this title (relating to Motion to Overturn Executive Director's Decision) apply. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the United States Environmental Protection Agency in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this division (relating to Cement Kilns).

Adopted May 23, 2007

Effective June 14, 2007

§117.3140. Continuous Demonstration of Compliance.

(a) Nitrogen oxides (NO_x) monitors. In accordance with the compliance schedule in §117.9320 of this title (relating to Compliance Schedule for Cement Kilns), the owner or operator shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) to monitor kiln exhaust NO_x.

(b) CEMS requirements. The owner or operator of any CEMS used to meet the monitoring requirement of subsection (a) of this section shall comply with the following.

(1) The CEMS must meet the requirements of 40 Code of Federal Regulations Part 60 as follows:

(A) §60.13;

(B) Appendix B, Performance Specification 2, for NO_x; and

(C) audits in accordance with Section 5.1 of Appendix F, quality assurance procedures, except that a cylinder gas audit or relative accuracy audit may be performed in lieu of the annual relative accuracy test audit (RATA) required in Section 5.1.1.

(2) One CEMS may be shared among kilns, provided:

(A) the exhaust stream of each kiln is analyzed separately; and

(B) the CEMS meets the certification requirements of paragraph (1) of this subsection for each exhaust stream.

(3) The CEMS is subject to the approval of the executive director.

(c) PEMS requirements. The owner or operator of any PEMS used to meet the monitoring requirement of subsection (a) of this section shall comply with the following.

(1) The PEMS must predict the NO_x emissions in the units of the applicable emission limitations of this division (relating to Cement Kilns).

(2) The PEMS must meet the requirements of §117.8100(b) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources).

Adopted May 23, 2007

Effective June 14, 2007

§117.3142. Emission Testing and Monitoring for Eight-Hour Attainment Demonstration.

(a) An owner or operator of any portland cement kiln that is subject to the source cap of §117.3123 of this title (relating to Dallas-Fort Worth Eight-Hour Ozone Attainment Demonstration Control Requirements) shall comply with the following monitoring requirements.

(1) The nitrogen oxides (NO_x) monitoring requirements of §117.3140 of this title (relating to Continuous Demonstration of Compliance) apply. The following requirements also apply.

(A) For a single portland cement kiln with multiple exhaust stacks, each individual stack must be analyzed separately.

(B) One continuous emission monitoring system (CEMS) may be shared among portland cement kilns or among multiple exhaust stacks on a single portland cement kiln, provided:

(i) the exhaust stream of each stack is analyzed and reported separately; and

(ii) the CEMS meets the certification requirements of §117.3140(b) of this title for each exhaust stream while the CEMS is operating in the time-shared mode.

(C) All bypass stacks must be monitored continuously, in order to quantify emissions directed through the bypass stack. If the CEMS is located upstream of the bypass stack then:

(i) no effluent streams from other potential sources of NO_x emissions may be introduced between the CEMS and the bypass stack; and

(ii) the owner or operator shall install, operate, and maintain a continuous monitoring system to record automatically the date, time, and duration of each event when the bypass stack is open.

(2) Stack exhaust flow rate must be monitored with a flow meter using the monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(3) For portland cement kilns that inject ammonia or urea for NO_x control, fuel type notwithstanding, ammonia emissions must be monitored according to one of the methods specified in §117.8130(1), (2), or (4) of this title (relating to Ammonia Monitoring) to demonstrate compliance with the ammonia emission specification in §117.3123(f) of this title. The ammonia monitoring requirements of this paragraph only apply from March 1 to October 31 of each calendar year, or any other time the owner or operator injects ammonia or urea for NO_x control.

(4) Installation of monitors must be performed in accordance with the schedule specified in §117.9320(c) of this title (relating to Compliance Schedule for Cement Kilns).

(b) The owner or operator of a portland cement kiln subject to the source cap requirements of §117.3123 of this title shall calculate NO_x emissions for determining compliance with the source cap as follows. The calculation requirements of this subsection only apply from March 1 to October 31 of each calendar year.

(1) Hourly NO_x emissions. Hourly NO_x emissions for each kiln must be calculated according to the following equation.

$$EH = C \times F \times K \times \frac{60\text{min}}{\text{hour}}$$

Where:

- EH = total hourly NO_x emissions from each kiln located at the account, in pounds per hour;
- C = the block hour average NO_x concentration, determined in accordance with subsection (a)(1) of this section, in parts per million by volume (ppmv), dry basis;
- F = the block average exhaust flow rate, determined in accordance with subsection (a)(2) of this section, in dry standard cubic feet per minute; and
- K = conversion factor, 1.194 x 10⁻⁷ pounds per standard cubic foot per ppmv (40 CFR Part 60, Appendix A, Method 19, Table 19-1).

(2) Daily NO_x emissions. The daily total NO_x emission for each kiln must be calculated as the sum of the hourly NO_x emissions for each calendar day, reported in tons per day, and must be calculated according to the following equation.

$$ED = \frac{\sum_{i=1}^N EH_i}{2000}$$

Where:

- ED = total daily NO_x emissions from each kiln located at the account, in tons per day;
- EH = total hourly NO_x emissions from each kiln located at the account, in pounds per hour calculated according to the equation in subsection (b)(1) of this section; and
- N = number of hours of operation per day for each kiln located at the account, in hours.

(3) Thirty-day rolling average. The 30-day rolling average NO_x emissions for the account must be calculated according to the following equation.

$$E_{30\text{day}} = \frac{\sum_{i=1}^K \sum_{j=1}^N ED_{i,j}}{N}$$

Where:

- $E_{30\text{day}}$ = 30-day rolling average NO_x emissions in tons per day for the account, computed for the preceding 30 days;
- ED = total daily NO_x emissions from each kiln located at the account, in tons per day, calculated according to the equation in subsection (b)(2) of this section;
- K = number of kilns located at the account; and
- N = preceding 30 days.

Adopted May 23, 2007

Effective June 14, 2007

§117.3145. Notification, Recordkeeping, and Reporting Requirements.

(a) Notification. The owner or operator of each portland cement kiln shall submit verbal notification to the executive director of the date of any continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) performance evaluation conducted under §117.3140 or §117.3142 of this title (relating to Continuous Demonstration of Compliance; and Emission Testing and Monitoring for Eight-Hour Attainment Demonstration) at least 15 days before such date followed by written notification within 15 days after testing is completed.

(b) Reporting of test results. The owner or operator of each portland cement kiln shall furnish the executive director and any local air pollution control agency having jurisdiction a copy of any CEMS or PEMS relative accuracy test audit conducted under §117.3140 or §117.3142 of this title:

- (1) within 60 days after completion of such testing or evaluation; and
- (2) not later than the appropriate compliance date in §117.9320 of this title (relating to Compliance Schedule for Cement Kilns).

(c) Recordkeeping. The owner or operator of a portland cement kiln subject to the requirements of this division (relating to Cement Kilns) 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, United States Environmental Protection

Agency, or local air pollution control agencies having jurisdiction. The records must include:

(1) for each kiln subject to §117.3110 or 117.3120 of this title (relating to Emission Specifications; and Source Cap), monitoring records of:

(A) daily and rolling 30-day average (and, for each kiln subject to the source cap in §117.3120 of this title, rolling 90-day average) nitrogen oxides (NO_x) emissions (in pounds);

(B) daily and rolling 30-day average (and, for each kiln subject to the source cap in §117.3120 of this title, rolling 90-day average) production of clinker (in United States short tons); and

(C) average NO_x emission rate (in pounds per ton (lb/ton) of clinker produced) on the basis of a rolling 30-day average (and, for each kiln subject to the source cap in §117.3120 of this title, a rolling 90-day average);

(2) records of the results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS and PEMS;

(3) records of the results of any stack testing conducted; and

(4) for each kiln subject to the source cap in §117.3123 of this title (relating to Dallas-Fort Worth Eight-Hour Ozone Attainment Demonstration Control Requirements) and emission testing and monitoring requirements in §117.3142 of this title:

(A) records of the control plan required under §117.3123 of this title;

(B) hourly records of the average NO_x concentration in parts per million by volume;

(C) hourly records of the NO_x emissions in pounds per hour;

(D) daily records of the NO_x emissions in tons per day;

(E) daily records of the NO_x emissions in tons per day expressed as a 30-day rolling average;

(F) hourly records of the average exhaust gas flow rate in dry standard cubic feet per minute; and

(G) records of ammonia monitoring required under §117.3142(a)(3)
of this title.

Adopted May 23, 2007

Effective June 14, 2007

**SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL
DIVISION 3: WATER HEATERS, SMALL BOILERS, AND PROCESS
HEATERS**

**§§117.3200, 117.3201, 117.3203, 117.3205, 117.3210, 117.3215
Effective June 14, 2007**

§117.3200. Applicability.

This division (relating to Water Heaters, Small Boilers, and Process Heaters) applies to manufacturers, distributors, retailers, and installers of natural gas-fired water heaters, boilers, and process heaters with a maximum rated capacity of 2.0 million British thermal units per hour or less.

Adopted May 23, 2007

Effective June 14, 2007

§117.3201. Definitions.

Unless specifically defined in Texas Health and Safety Code, Chapter 382 (also known as the Texas Clean Air Act) or in the rules of the commission, the terms used by the commission have the meanings commonly used in the field of air pollution control. In addition to the terms that are defined by Texas Health and Safety Code, Chapter 382, the following terms, when used in this division (relating to Water Heaters, Small Boilers, and Process Heaters), have the following meanings, unless the context clearly indicates otherwise. Additional definitions for terms used in this division are found in §§3.2, 101.1, and 117.10 of this title (relating to Definitions).

(1) **Heat output**--The product H_o obtained when a Type 0, 1, or 2 unit is tested according to Section 9.3 of the South Coast Air Quality Management District Protocol: Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers (January 1998).

(2) **Type 0 unit**--Any water heater, boiler, or process heater with a maximum rated capacity of no more than 75,000 British thermal units per hour.

(3) **Type 1 unit**--Any water heater, boiler, or process heater with a maximum rated capacity greater than 75,000, but no more than 400,000 British thermal units per hour.

(4) **Type 2 unit**--Any water heater, boiler, or process heater with a maximum rated capacity greater than 400,000 British thermal units per hour, but no more than 2.0 million British thermal units per hour.

(5) **Water heater**--A closed vessel in which water is heated by combustion of gaseous fuel and is withdrawn for use external to the vessel at pressures

not exceeding 160 pounds per square inch gauge, including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210 degrees Fahrenheit.

Adopted May 23, 2007

Effective June 14, 2007

§117.3203. Exemptions.

This division (relating to Water Heaters, Small Boilers, and Process Heaters) does not apply to:

- (1) units using a fuel other than natural gas;
- (2) units used in recreational vehicles;
- (3) Type 0 units, or Type 1 or 2 units at single-family residences, used exclusively to heat swimming pools and hot tubs;
- (4) units manufactured in Texas for shipment and use outside of Texas;

and

(5) units that do not comply with the nitrogen oxides specifications in §117.3205 of this title (relating to Emission Specifications) that are sold, supplied, or offered for sale in Texas, provided that the manufacturer or distributor can demonstrate that the units are intended for shipment and use outside of Texas, and that the manufacturer or distributor has taken reasonable, prudent precautions to assure that the units are not distributed for sale in Texas. This paragraph does not apply to units that are sold, supplied, or offered for sale by any person to retail outlets in Texas.

Adopted May 23, 2007

Effective June 14, 2007

§117.3205. Emission Specifications.

(a) Natural gas-fired boilers and process heaters sold, distributed, installed, or offered for sale within the State of Texas must meet the following specifications for nitrogen oxides (NO_x).

(1) Type 0 units manufactured on or after July 1, 2002, but no later than December 31, 2004, must not exceed:

- (A) 40 nanograms per joule (ng/J) of heat output; or
- (B) 55 parts per million by volume (ppmv) at 3.0% oxygen (O₂),
dry.

exceed: (2) Type 0 units manufactured on or after January 1, 2005, must not

(A) 10 ng/J of heat output; or

(B) 15 ppmv at 3.0% O₂, dry.

(3) Type 1 units manufactured on or after July 1, 2002, must not exceed:

(A) 40 ng/J of heat output; or

(B) 55 ppmv at 3.0% O₂, dry.

(4) Type 2 units manufactured on or after July 1, 2002, must not exceed:

(A) 30 ppmv at 3.0% O₂, dry; or

heat input. (B) 0.037 pounds per million British thermal units (lb/MMBtu) of

(b) Natural gas-fired water heaters sold, distributed, installed, or offered for sale within the State of Texas must meet the following specifications for NO_x.

(1) Type 0 units manufactured on or after July 1, 2002, must not exceed:

(A) 40 ng/J of heat output; or

(B) 55 ppmv at 3.0% O₂, dry.

(2) Type 1 units manufactured on or after July 1, 2002, must not exceed:

(A) 40 ng/J of heat output; or

(B) 55 ppmv at 3.0% O₂, dry.

(3) Type 2 units manufactured on or after July 1, 2002, must not exceed:

(A) 30 ppmv at 3.0% O₂, dry; or

(B) 0.037 lb/MMBtu of heat input.

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Effective June 14, 2007

§117.3210. Certification Requirements.

(a) The manufacturer shall demonstrate that each model of Type 0, 1, and 2 unit subject to the requirements of §117.3205 of this title (relating to Emission Specifications) has been tested in accordance with Test Method 7 (40 Code of Federal Regulations Part 60, Appendix A), including 7A-E, and the South Coast Air Quality Management District (SCAQMD) Protocol: Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers (January 1998).

(b) The manufacturer may submit to the executive director an approved Bay Area Air Quality Management District or SCAQMD certification in lieu of conducting duplicative certification tests.

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§117.3215. Notification and Labeling Requirements.

(a) Each manufacturer shall submit to the executive director a statement certifying that Type 0, 1, and 2 units subject to the requirements of §117.3205 of this title (relating to Emission Specifications) are in compliance with §117.3205 of this title. The statement must be signed and dated and attest to the accuracy of all information. The statement must include the manufacturer's brand name, model number, and the input rating as it appears on the rating plate. The manufacturer shall inform their wholesaler and/or retailer of the certification requirement of this subsection.

(b) The manufacturer shall display the model number and date of manufacture of each Type 0, 1, and 2 unit complying with §117.3205 of this title on the shipping carton and rating plate of each Type 0, 1, and 2 unit.

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SUBCHAPTER E: MULTI-REGION COMBUSTION CONTROL
DIVISION 4: EAST TEXAS COMBUSTION
§§117.3300, 117.3303, 117.3310, 117.3325, 117.3330, 117.3335, 117.3345
Effective June 14, 2007

§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.

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§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.

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§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_x) 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) The owner or operator of any engine subject to the NO_x emission specifications of subsection (a) of this section that injects urea or ammonia into the exhaust stream for NO_x control, shall not allow the discharge into the atmosphere ammonia emissions in excess of 10 parts per million by volume at 3.0% O₂, dry, except as provided in §117.3325 of this title (relating to Alternative Case Specific Specifications), based on:

(1) a block one-hour averaging period for units not equipped with a continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) for ammonia; or

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

(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_x emission specifications of this section.

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§117.3325. Alternative Case Specific Specifications.

(a) Where a person can demonstrate that an affected engine cannot attain the ammonia specification of §117.3310(e) of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration), the executive director may approve emission specifications different from the ammonia specification in §117.3310(e) of this title for that engine. The executive director:

(1) shall consider on a case-by-case basis the technological and economic circumstances of the individual engine;

(2) shall determine that such specifications are the result of the lowest emission limitation the engine is capable of meeting after the application of controls to meet the nitrogen oxides emission specifications of §117.3310 of this title; and

(3) in determining whether to approve alternative emission specifications, may take into consideration the ability of the plant where the engine is located to meet emission specifications through system-wide averaging at maximum capacity.

(b) Any owner or operator affected by the executive director's decision to deny an alternative case specific emission specification may file a motion to overturn the executive director's decision. The requirements of §50.139 of this title (relating to Motion to Overturn Executive Director's Decision) apply.

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§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_x) 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_x concentrations to less than or equal to the NO_x 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_x 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_x are exempt from the requirements of this paragraph.

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§117.3335. Monitoring, Notification, and Testing Requirements.

(a) Oxygen (O₂) monitors. If the owner or operator installs a continuous emissions monitoring system (CEMS) to monitor O₂, 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_x) monitors. If the owner or operator installs a CEMS or predictive emissions monitoring system (PEMS) to monitor NO_x, 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_x or O₂ 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_x and O₂ emissions.

(2) Each engine that injects urea or ammonia into the exhaust stream for NO_x 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_x and O₂ 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_x 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_x 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_x emission rate, including, but not limited to, installation of post-combustion controls or low-NO_x 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_x 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.

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§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.

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