Texas Commission on Environmental Quality
Chapter 117 – Control of Air Pollution from Nitrogen Compounds

Subchapter B : Combustion Control at Major Industrial, Commercial, and Institutional Sources In Ozone Nonattainment Areas

DIVISION 4 : DALLAS-FORT WORTH EIGHT-HOUR OZONE NONATTAINMENT AREA MAJOR SOURCES
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SUBCHAPTER B: COMBUSTION CONTROL AT MAJOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL SOURCES IN OZONE NONATTAINMENT AREAS
DIVISION 4: DALLAS-FORT WORTH EIGHT-HOUR OZONE NONATTAINMENT AREA MAJOR SOURCES
§§117.400, 117.403, 117.405, 117.410, 117.423, ~~117.425~~, 117.430, 117.435, 117.440, 117.445, 117.450, 117.452, 117.454, 117.456
Effective June 25, 2015

§117.400. Applicability.

(a) The provisions of this division apply to the following units located at any major stationary source of nitrogen oxides (NO_X) located in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, or Tarrant County:

(1) industrial, commercial, or institutional boilers and process heaters;

(2) stationary gas turbines;

(3) stationary internal combustion engines;

(4) duct burners used in turbine exhaust ducts;

(5) lime kilns;

(6) metallurgical heat treating furnaces and reheat furnaces;

(7) incinerators;

(8) glass, fiberglass, and mineral wool melting furnaces;

(9) fiberglass and mineral wool curing ovens;

(10) natural gas-fired ovens and heaters;

(11) natural gas-fired dryers used in organic solvent, printing ink, clay, brick, ceramic tile, calcining, and vitrifying processes;

(12) brick and ceramic kilns; and

(13) lead smelting reverberatory and blast (cupola) furnaces.

(b) The provisions of this division apply to the following units located at any major stationary source of NO_X located in Wise County:

(1) industrial, commercial, or institutional process heaters;

(2) stationary gas turbines; and

(3) stationary internal combustion engines.

Adopted June 3, 2015 Effective June 25, 2015

§117.403. Exemptions.

(a) Units located in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, or Tarrant County exempted from the provisions of this division, except as specified in §§117.440(i), 117.445(f)(4) and (9), 117.450, and 117.454 of this title (relating to Continuous Demonstration of Compliance; Notification, Recordkeeping, and Reporting Requirements; Initial Control Plan Procedures; and Final Control Plan Procedures for Attainment Demonstration Emission Specifications), include the following:

(1) industrial, commercial, or institutional boilers or process heaters with a maximum rated capacity equal to or less than:

(A) 2.0 million British thermal units per hour (MMBtu/hr) for boilers; and

(B) 5.0 MMBtu/hr for process heaters;

(2) heat treating furnaces and reheat furnaces with a maximum rated capacity less than 20 MMBtu/hr;

(3) flares, incinerators with a maximum rated capacity less than 40 MMBtu/hr, pulping liquor recovery furnaces, sulfur recovery units, sulfuric acid regeneration units, molten sulfur oxidation furnaces, and sulfur plant reaction boilers;

(4) dryers, heaters, or ovens with a maximum rated capacity of 5.0 MMBtu/hr or less;

(5) any dryers, heaters, or ovens fired on fuels other than natural gas. This exemption does not apply to gas-fired curing ovens used for the production of mineral wool-type or textile-type fiberglass;

(6) any glass, fiberglass, and mineral wool melting furnaces with a maximum rated capacity of 2.0 MMBtu/hr or less;

(7) stationary gas turbines and stationary internal combustion engines, that are used as follows:

(A) in research and testing of the unit;

(B) for purposes of performance verification and testing of the unit;

(C) solely to power other engines or gas turbines during startups;

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

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

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

(G) as chemical processing gas turbines;

(8) any stationary diesel engine placed into service before June 1, 2007, that:

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

(B) has not been modified, reconstructed, or relocated on or after June 1, 2007. For the purposes of this subparagraph, the terms "modification" and "reconstruction" have the meanings defined in §116.10 of this title and 40 CFR §60.15 (December 16, 1975), respectively, and the term "relocated" means to newly install at an

account, as defined in §101.1 of this title, a used engine from anywhere outside that account;

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

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

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

(10) boilers and industrial furnaces that were regulated as existing facilities by 40 CFR Part 266, Subpart H, as was in effect on June 9, 1993;

(11) brick or ceramic kilns with a maximum rated capacity less than 5.0 MMBtu/hr;

(12) low-temperature drying and curing ovens used in mineral wool-type fiberglass manufacturing and wet-laid, non-woven fiber mat manufacturing in which nitrogen-containing resins, or other additives are used;

(13) stationary, gas-fired, reciprocating internal combustion engines with a horsepower (hp) rating less than 50 hp;

(14) electric arc melting furnaces used in steel production;

(15) forming ovens and forming processes used in mineral wool-type fiberglass manufacturing; and

(16) natural gas-fired heaters used exclusively for providing comfort heat to areas designed for human occupancy.

(b) Units located in Wise County exempted from the provisions of this division, except as specified in §§117.440(i), 117.445(f)(4), 117.450, and 117.452 of this title (relating to Final Control Plan Procedures for Reasonably Available Control Technology), include the following:

(1) industrial, commercial, or institutional process heaters with a maximum rated capacity less than 40 MMBtu/hr;

(2) stationary gas turbines and stationary internal combustion engines that are used as follows:

(A) in research and testing of the unit;

(B) for purposes of performance verification and testing of the unit;

(C) solely to power other engines or gas turbines during startups;

(D) exclusively in emergency situations, except that operation for testing or maintenance purposes of the gas turbine or engine is allowed for up to 100 hours per year, based on a rolling 12-month basis; and

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

(3) stationary, diesel, reciprocating internal combustion engines;

(4) stationary, dual-fuel, reciprocating internal combustion engines; and

(5) stationary, gas-fired, reciprocating internal combustion engines with a hp rating less than 50 hp.

(c) The emission specifications in §117.410(a)(1) and (c) of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) do not apply to gas-fired boilers during periods that the owner or operator is required to fire fuel oil on an emergency basis due to natural gas curtailment or other emergency, provided:

(1) the fuel oil firing occurs during the months of November, December, January, or February; and

(2) the fuel oil firing does not exceed a total of 72 hours in any calendar month specified in paragraph (1) of this subsection.

Adopted June 3, 2015 Effective June 25, 2015

§117.405. Emission Specifications for Reasonably Available Control Technology (RACT).

(a) Reasonably Available Control Technology (RACT) emission specifications for wood-fired boilers. For units located in the Dallas-Fort Worth eight-hour ozone nonattainment area, no person shall allow the discharge into the atmosphere nitrogen oxides (NO_X) emissions in excess of 0.12 pounds per million British thermal units (lb/MMBtu) for wood-fired boilers, in accordance with the applicable schedule in §117.9030(a) of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources), except as provided in subsection (e) of this section.

(b) Emission specifications for RACT in Wise County. For units located in Wise County, no person shall allow the discharge into the atmosphere NO_X emissions in excess of the following emission specifications, in accordance with the applicable schedule in §117.9030(a) of this title, except as provided in subsection (e) of this section:

(1) process heaters with a maximum rated capacity equal to or greater than 40 million British thermal units per hour (MMBtu/hr), 0.10 lb/MMBtu (or alternatively, 82 parts per million by volume (ppmv), at 3.0% oxygen (O2), dry basis);

(2) stationary, reciprocating internal combustion engines:

(A) gas-fired rich-burn engines, 0.50 grams per horsepower-hour (g/hp-hr); and

(B) gas-fired lean-burn engines:

(i) White Superior four-cycle units that have been placed into service, modified, reconstructed, or relocated:

(I) before June 1, 2015, 12.0 g/hp-hr; and

(II) on or after June 1, 2015, 2.0 g/hp-hr;

(ii) Clark two-cycle units that have been placed into service, modified, reconstructed, or relocated:

(I) before June 1, 2015, 12.0 g/hp-hr; and

(II) on or after June 1, 2015, 2.0 g/hp-hr;

(iii) Fairbanks Morse MEP two-cycle units that have been placed into service, modified, reconstructed, or relocated:

(I) before June 1, 2015, 4.0 g/hp-hr; and

(II) on or after June 1, 2015, 2.0 g/hp-hr; and

(iv) all others, 2.0 g/hp-hr; and

(3) stationary gas turbines:

(A) with a horsepower (hp) rating of less than 10,000 hp , 0.55 lb/MMBtu; and

(B) with a hp rating of 10,000 hp or greater, 0.15 lb/MMBtu.

(c) NO_X averaging time. The emission specifications of subsections (a) and (b) of this section apply:

(1) if the unit is operated with a NO_X continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) under §117.440 of this title (relating to Continuous Demonstration of Compliance), either as:

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

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

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

(2) if the unit is not operated with a NO_X CEMS or PEMS under §117.440 of this title, a block one-hour average, in the units of the applicable standard. Alternatively for boilers and process heaters, the emission specification may be applied in pounds per hour, as specified in paragraph (1)(C) of this subsection.

~~(d) Related emissions. No person shall allow the discharge into the atmosphere from any unit subject to NO_X emission specifications in subsection (a) or (b) of this section, emissions in excess of the following, except as provided in §117.425 of this title (relating to Alternative Case Specific Specifications) or paragraph (3) of this subsection.~~

~~(1) Carbon monoxide (CO) emissions must not exceed 400 ppmv at 3.0% O2, dry basis (or alternatively, 3.0 g/hp-hr for stationary internal combustion engines; or 775 ppmv at 7.0% O2, dry basis for wood fuel-fired boilers or process heaters):~~

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

~~(B) on a block one-hour averaging period, for units not equipped with CEMS or PEMS for CO.~~

~~(2) For units that inject urea or ammonia into the exhaust stream for NO_X control, ammonia emissions must not exceed 10 ppmv at 3.0% O2, dry, for boilers and process heaters; 15% O2, dry, for stationary gas turbines and gas-fired lean-burn engines; and 3.0% O2, dry, for all other units, based on:~~

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

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

~~(3) The correction of CO emissions to 3.0% O2, dry basis, in paragraph (1) of this subsection does not apply to boilers and process heaters operating at less than 10% of maximum load and with stack O2 in excess of 15% (i.e., hot-standby mode).~~

(e) Compliance flexibility.

(1) An owner or operator may use any of the following alternative methods to comply with the NO_X emission specifications of this section:

(A) §117.423 of this title (relating to Source Cap); or

(B) §117.9800 of this title (relating to Use of Emission Credits for Compliance).

(2) Section 117.425 of this title is not an applicable method of compliance with the NO_X emission specifications of this section.

(3) An owner or operator may petition the executive director for an alternative to the CO or ammonia specifications of this section in accordance with §117.425 of this title.

(f) Prohibition of circumvention.

(1) The maximum rated capacity used to determine the applicability of the emission specifications in this section and the initial compliance demonstration, monitoring, testing requirements, and final control plan in §§117.435, 117.440, and 117.452 of this title (relating to Initial Demonstration of Compliance; Continuous Demonstration of Compliance; and Final Control Plan Procedures for Reasonably Available Control Technology) must be the greater of the following:

(A) the maximum rated capacity as of December 31, 2012;

(B) the maximum rated capacity after December 31, 2012; or

(C) the maximum rated capacity authorized by a permit issued under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) after December 31, 2012.

(2) A unit's classification is determined by the most specific classification applicable to the unit as of December 31, 2012. For example, a unit that is classified as a stationary gas-fired engine as of December 31, 2012, but subsequently is authorized to operate as a dual-fuel engine, is classified as a stationary gas-fired engine for the purposes of this chapter.

(3) A source that met the definition of major source on December 31, 2012, is always classified as a major source for purposes of this chapter. A source that did not meet the definition of major source (i.e., was a minor source, or did not yet exist) on December 31, 2012, but becomes a major source at any time after December 31, 2012, is from that time forward always classified as a major source for purposes of this chapter.

Adopted June 3, 2015 Effective June 25, 2015

§117.410. Emission Specifications for Eight-Hour Attainment Demonstration.

(a) Emission specifications for eight-hour ozone attainment demonstration. For units located in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, or Tarrant County, no person shall allow the discharge into the atmosphere nitrogen oxides (NO_X) emissions in excess of the following emission specifications, in accordance with the applicable schedule in §117.9030(b) of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources), except as provided in subsection (d) of this section:

(1) gas-fired boilers:

(A) with a maximum rated capacity equal to or greater than 100 million British thermal units per hour (MMBtu/hr), 0.020 pounds per million British thermal units (lb/MMBtu);

(B) with a maximum rated capacity equal to or greater than 40 MMBtu/hr, but less than 100 MMBtu/hr, 0.030 lb/MMBtu; and

(C) with a maximum rated capacity less than 40 MMBtu/hr, 0.036 lb/MMBtu (or alternatively, 30 parts per million by volume (ppmv) NO_X, at 3.0% oxygen (O_2), dry basis);

(2) liquid-fired boilers, 2.0 pounds per 1,000 gallons of liquid burned;

(3) process heaters:

(A) with a maximum rated capacity equal to or greater than 40 MMBtu/hr, 0.025 lb/MMBtu; and

(B) with a maximum rated capacity less than 40 MMBtu/hr, 0.036 lb/MMBtu (or alternatively, 30 ppmv, at 3.0% O_2, dry basis);

(4) stationary, reciprocating internal combustion engines:

(A) gas-fired rich-burn engines:

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

(ii) all others, 0.50 g/hp-hr;

(B) gas-fired lean-burn engines:

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

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

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

(II) all others, 0.50 g/hp-hr;

(C) dual-fuel engines, 0.50 g/hp-hr;

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

(E) for diesel engines, excluding dual-fuel engines, not subject to subparagraph (D) of this paragraph:

(i) with a horsepower (hp) rating of less than 50 hp that are installed, modified, reconstructed, or relocated on or after March 1, 2009, 5.0 g/hp-hr;

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

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

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

(F) for the purposes of this paragraph, the terms "modification" and "reconstruction" have the meanings defined in §116.10 of this title (relating to General Definitions) and 40 Code of Federal Regulations (CFR) §60.15 (December 16, 1975), respectively, and the term "relocated" means to newly install at an account, as defined in §101.1 of this title (relating to Definitions), a used engine from anywhere outside that account;

(5) stationary gas turbines:

(A) rated at 10 megawatts (MW) or greater, 0.032 lb/MMBtu;

(B) rated at 1.0 MW or greater, but less than 10 MW, 0.15 lb/MMBtu; and

(C) rated at less than 1.0 MW, 0.26 lb/MMBtu;

(6) duct burners used in turbine exhaust ducts, the corresponding gas turbine emission specification of paragraph (5) of this subsection;

(7) kilns:

(A) lime kilns, 3.7 pounds per ton (lb/ton) of calcium oxide, demonstrated either:

(i) on an individual kiln basis; or

(ii) on a site-wide production rate weighted average basis, using the following equation:

Figure: 30 TAC §117.410(a)(7)(A)(ii)

$$E_{avg} = \frac{\sum_{i=1}^{N} (E_i \times PR_i)}{\sum_{i=1}^{N} PR_i}$$

Where:

E_{avg} = daily production rate weighted average nitrogen oxides (NO_X) emission rate, pounds per ton (lb/ton) of calcium oxide;

E_i = daily average NO_X emission rate for kiln i, lb/ton of calcium oxide;

i = each lime kiln at the site;

N = the total number of kilns at the site; and

PR_i = production rate of calcium oxide for kiln i, tons/day.

(B) brick and ceramic kilns, one of the following:

(i) a 40% reduction from the daily NO_X emissions reported to the Emissions Assessment Section for the calendar year 2000 Emissions Inventory. To ensure that this emission specification will result in a real 40% reduction in actual emissions, a consistent methodology must be used to calculate the 40% reduction;

(ii) 0.175 lb/ton of product for brick kilns; or

(iii) 0.27 lb/ton of product for ceramic kilns;

(8) metallurgical furnaces:

(A) heat treating furnaces, 0.087 lb/MMBtu. For heat treating furnaces equipped with NO_X continuous emissions monitoring systems (CEMS) or predictive emissions monitoring systems (PEMS) that comply with §117.440 of this title (relating to Continuous Demonstration of Compliance), this emission specification only applies from March 1 to October 31 of any calendar year;

(B) reheat furnaces, 0.10 lb/MMBtu. For reheat furnaces equipped with NO_X CEMS or PEMS that comply with §117.440 of this title, this emission specification only applies from March 1 to October 31 of any calendar year; and

(C) lead smelting blast (cupola) and reverberatory furnaces used in conjunction, the combined rate of 0.45 lb/ton product;

(9) incinerators, either of the following:

(A) an 80% reduction from the daily NO_X emissions reported to the Emissions Assessment Section for the calendar year 2000 Emissions Inventory. To ensure that this emission specification will result in a real 80% reduction in actual emissions, a consistent methodology must be used to calculate the 80% reduction; or

(B) 0.030 lb/MMBtu;

(10) glass and fiberglass melting furnaces:

(A) container glass melting furnaces:

(i) 4.0 lb/ton of glass pulled during furnace operation equal to or greater than 25% of the permitted glass production capacity; and

(ii) the applicable maximum allowable pound per hour NO_X permit limit in a permit issued before June 1, 2007, during furnace operation less than 25% of the permitted glass production capacity;

(B) mineral wool-type cold-top electric fiberglass melting furnaces, 4.0 lb/ton of product pulled;

(C) mineral wool-type fiberglass regenerative furnaces, 1.45 lb/ton of product pulled; and

(D) mineral wool-type fiberglass non-regenerative gas-fired furnaces, 3.1 lb/ton product pulled;

(11) gas-fired curing ovens used for the production of mineral wool-type or textile-type fiberglass, 0.036 lb/MMBtu;

(12) natural gas-fired ovens and heaters, 0.036 lb/MMBtu;

(13) natural gas-fired dryers:

(A) dryers used in organic solvent, printing ink, clay, brick, ceramic tile, calcining, and vitrifying processes, 0.036 lb/MMBtu;

(B) spray dryers used in ceramic tile manufacturing processes, 0.15 lb/MMBtu; and

(14) as an alternative to the emission specifications in paragraphs (1) - (13) of this subsection for units with an annual capacity factor of 0.0383 or less, 0.060 lb/MMBtu. The capacity factor as of December 31, 2000, must be used to determine whether the unit is eligible for the emission specification of this paragraph. A 12-month rolling average must be used to determine the annual capacity factor for units placed into service after December 31, 2000.

(b) NO_X averaging time. The emission specifications of subsection (a) of this section apply:

(1) if the unit is operated with a NO_X CEMS or PEMS under §117.440 of this title, either as:

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

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

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

(2) if the unit is not operated with a NO_X CEMS or PEMS under §117.440 of this title, a block one-hour average, in the units of the applicable standard. Alternatively for boilers and process heaters, the emission specification may be applied in pounds per hour, as specified in paragraph (1)(C) of this subsection.

~~(c) Related emissions. No person shall allow the discharge into the atmosphere from any unit subject to NO_X emission specifications in subsection (a) of this section, emissions in excess of the following, except as provided in §117.425 of this title (relating to Alternative Case Specific Specifications) or paragraph (3) or (4) of this subsection.~~

~~(1) Carbon monoxide (CO) emissions must not exceed 400 ppmv at 3.0% O2, dry basis (or alternatively, 3.0 g/hp-hr for stationary internal combustion engines; or 775 ppmv at 7.0% O2, dry basis for wood fuel-fired boilers or process heaters):~~

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

~~(B) on a block one-hour averaging period, for units not equipped with CEMS or PEMS for CO.~~

~~(2) For units that inject urea or ammonia into the exhaust stream for NO_X control, ammonia emissions must not exceed 10 ppmv at 3.0% O2, dry, for boilers and process heaters; 15% O2, dry, for stationary gas turbines (including duct burners used in turbine exhaust ducts) and gas-fired lean-burn engines; 7.0% O2, dry, for incinerators; and 3.0% O2, dry, for all other units, based on:~~

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

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

~~(3) The correction of CO emissions to 3.0% O2, dry basis, in paragraph (1) of this subsection does not apply to boilers and process heaters operating at less than 10% of maximum load and with stack O2 in excess of 15% (i.e., hot-standby mode).~~

~~(4) The CO specifications in paragraph (1) of this subsection do not apply to incinerators subject to the CO limits of one of the following:~~

~~(A) §111.121 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators);~~

~~(B) §113.2072 of this title (relating to Emission Limits) for hospital/medical/infectious waste incinerators; or~~

~~(C) 40 CFR Part 264 or 265, Subpart O, for hazardous waste incinerators.~~

(d) Compliance flexibility.

(1) An owner or operator may use any of the following alternative methods to comply with the NO_X emission specifications of this section:

(A) §117.423 of this title (relating to Source Cap); or

(B) §117.9800 of this title (relating to Use of Emission Credits for Compliance).

(2) Section 117.425 of this title is not an applicable method of compliance with the NO_X emission specifications of this section.

(3) An owner or operator may petition the executive director for an alternative to the CO or ammonia specifications of this section in accordance with §117.425 of this title.

(e) Prohibition of circumvention.

(1) The maximum rated capacity used to determine the applicability of the emission specifications in this section and the initial compliance demonstration, monitoring, testing requirements, and final control plan in §§117.435, 117.440, and 117.454 of this title (relating to Initial Demonstration of Compliance; Continuous Demonstration of Compliance; and Final Control Plan Procedures for Attainment Demonstration Emission Specifications) must be the greater of the following:

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

(B) the maximum rated capacity after December 31, 2000; or

(C) the maximum rated capacity authorized by a permit issued under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) after December 31, 2000.

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

(3) Changes after December 31, 2000, to a unit subject to an emission specification in this section that result in increased NO_X emissions from a unit not subject to an emission specification of this section, such as redirecting one or more fuel or waste streams containing chemical-bound nitrogen to an incinerator with a maximum rated capacity of less than 40 MMBtu/hr, or a flare, are only allowed if:

(A) the increase in NO_X emissions at the unit not subject to this section is determined using a CEMS or PEMS that meets the requirements of §117.440 of this title, or through stack testing that meets the requirements of §117.435 of this title; and

(B) emission credits equal to the increase in NO_X emissions at the unit not subject to this section are obtained and used in accordance with §117.9800 of this title.

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

(5) The availability under subsection (a)(14) of this section of an emission specification for units with an annual capacity factor of 0.0383 or less is based on the unit's status as of December 31, 2000. Reduced operation after December 31, 2000, cannot be used to qualify for a more lenient emission specification under subsection (a)(14) of this section than would otherwise apply to the unit.

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

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

(2) to verify reliability of emergency equipment (e.g., emergency generators or pumps) immediately after unforeseen repairs. Routine maintenance such as an oil change is not considered to be an unforeseen repair; or

(3) firewater pumps for emergency response training conducted from April 1 through October 31.

Adopted June 3, 2015 Effective June 25, 2015

§117.423. Source Cap.

(a) An owner or operator may achieve compliance with the nitrogen oxides (NO_X) emission specifications of §117.405 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration), by achieving equivalent NO_X emission reductions obtained by compliance with a source cap emission limitation in accordance with the requirements of this section. Each equipment category at a source whose individual emission units would otherwise be subject to the NO_X emission specifications of §117.405 or §117.410 of this title may be included in the source cap. Any equipment category included in the source cap must include all emission units belonging to that category. Equipment categories include, but are not limited to, the following: steam generation, electrical generation, and units with the same product outputs, such as ethylene cracking furnaces. All emission units not included in the source cap must comply with the requirements of §117.405 or §117.410 of this title.

(b) The source cap allowable mass emission rate must be calculated as follows.

(1) A rolling 30-day average emission cap must be calculated for all emission units included in the source cap using the following equation.

Figure: 30 TAC §117.423(b)(1)

$$Cap_{30\,day} = \sum_{i=1}^{N} \left(H_i \times R_i \right)$$

Where:

Cap_{30day} = the nitrogen oxides (NO_X) 30-day rolling average emission cap in pounds per day;

i = each emission unit in the emission cap;

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

H_i = for units subject to §117.405 of this title, the actual historical average of the daily heat input for each unit included in the source cap, in million British thermal units per day (MMBtu/day), as certified to the executive director, for a 24 consecutive month period between January 1, 2012 and December 31, 2013. For units subject to §117.410 of this title, the actual historical average of the daily heat input for each unit included in the source cap, in MMBtu/day, as certified to the executive director, for a 24 consecutive month period between January 1, 2000, and December 31, 2001. All sources included in the source cap must use the same 24 consecutive month period. If sufficient historical data are not available for this calculation, the executive director and the United States Environmental Protection Agency may approve another method for calculating H_i; and

R_i = the lowest of:

(i) the applicable NO_X emission specification of §117.405 or §117.410 of this title;

(ii) any permit NO_X emission limit for any unit subject to a permit issued in accordance with Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification), in pounds per million British thermal units (lb/MMBtu), that applies to emission unit i in the absence of trading, in the Dallas-Fort Worth eight-hour ozone nonattainment area, in effect on December 31, 2012, for units subject to §117.405 of this title, and December 31, 2000, for units subject to §117.410 of this title; and

(iii) the actual emission rate as of the dates specified in clause (ii) of this figure. All calculations of emission rates must presume that emission controls in effect on the dates specified in clause (ii) of this figure are in effect for the two-year period used in calculating the actual heat input.

(2) A maximum daily cap must be calculated for all emission units included in the source cap using the following equation.

Figure: 30 TAC §117.423(b)(2)

$$Cap_{daily} = \sum_{i=1}^{N} \left(H_{mi} \times R_i \right)$$

Where:

Cap_{daily} = the NO_X maximum daily cap in pounds per day;

i = as defined in paragraph (1) of this subsection;

N = as defined in paragraph (1) of this subsection;

H_{mi} = the maximum daily heat input, as certified to the executive director, allowed or possible (whichever is lower) in a 24-hour period; and

R_i = as defined in paragraph (1) of this subsection.

(3) Each emission unit included in the source cap is subject to the requirements of both paragraphs (1) and (2) of this subsection at all times.

(4) For stationary internal combustion engines, the source cap allowable emission rate must be calculated in pounds per hour using the following equation.

Figure: 30 TAC §117.423(b)(4)

$$\text{Cap}_{\text{ICE}} = \frac{\text{MRC} \times \text{ES}}{\text{HR} \times \left(454 \times 10^{-6} \right)}$$

Where:

Cap_{ICE} = source cap allowable emission rate in pounds per hour;

ES = emission specification in grams per horsepower-hour (g/hp-hr);

MRC = engine manufacturer's rated heat input in million British thermal units per hour; and

HR = engine manufacturer's rated heat rate at the engines horsepower (hp) rating, in British thermal units per horsepower-hour.

(5) For stationary gas turbines, the source cap allowable emission rate must be calculated in pounds per hour using the following equations.

Figure: 30 TAC §117.423(b)(5)

$$C_{instack} = A_{NO_X} \times \left(1 - \frac{\%H_2O}{100}\right) \times \left[\left(20.9 - \frac{\%O_2}{\left(1 - \frac{\%H_2O}{100}\right)}\right) \times \frac{1}{5.9}\right]$$

$$\text{Cap}_{GT} = C_{instack} \times MF \times \left(\frac{46}{28} \times 10^{-6}\right)$$

Where:

$C_{instack}$ = the nitrogen oxides (NO_X) in-stack concentration in parts per million by volume (ppmv);

A_{NOX} = the applicable NO_X emission specification of §117.405 or §117.410 of this title (expressed in parts per million by volume NO_X at 15% oxygen (O_2), dry basis);

$\%H_2O$ = the volume percent of water in the stack gases, as calculated from the manufacturer's data, or other data as approved by the executive director, at megawatt (MW) rating and International Standards Organization (ISO) flow conditions;

$\%O_2$ = the volume percent of O_2 in the stack gases on a wet basis, as calculated from the manufacturer's data or other data as approved by the executive director, at MW rating and ISO conditions;

Cap_{GT} = source cap allowable emission rate in pounds per hour; and

MF = the turbine manufacturer's rated exhaust flow rate, in pounds per hour at MW rating and ISO flow conditions.

(c) The owner or operator who elects to comply with this section shall:

(1) for each unit included in the source cap, either:

(A) install, calibrate, maintain, and operate a continuous exhaust NO_X monitor, carbon monoxide (CO) monitor, an oxygen (O_2) (or carbon dioxide (CO_2)) diluent monitor, and a totalizing fuel flow meter in accordance with the requirements of §117.440 of this title (relating to Continuous Demonstration of Compliance). The required continuous emissions monitoring systems (CEMS) and fuel flow meters must be used to measure NO_X, CO, and O_2 (or CO_2) emissions and fuel use for each affected unit and must be used to demonstrate continuous compliance with the source cap;

(B) install, calibrate, maintain, and operate a predictive emissions monitoring system (PEMS) and a totalizing fuel flow meter in accordance with the requirements of §117.440 of this title. The required PEMS and fuel flow meters must be used to measure NO_X, CO, and O_2 (or CO_2) emissions and fuel flow for each affected unit and must be used to demonstrate continuous compliance with the source cap; or

(C) for units not subject to continuous monitoring requirements, use the maximum emission rate as measured by hourly emission rate testing conducted in accordance with §117.435(d) of this title (relating to Initial Demonstration of Compliance) in lieu of CEMS or PEMS. Emission rates for these units are limited to the maximum emission rates obtained from testing conducted under §117.435(d) of this title; and

(2) for each operating unit equipped with CEMS, either use a PEMS in accordance with §117.440 of this title, or the maximum emission rate as measured by hourly emission rate testing conducted in accordance with §117.435(d) of this title, to provide emissions compliance data during periods when the CEMS is off-line. The methods specified in 40 Code of Federal Regulations §75.46 must be used to provide emissions substitution data for units equipped with PEMS.

(d) The owner or operator of any units subject to a source cap shall maintain daily records indicating the NO_X emissions from each unit and the total fuel usage for each unit and include a total NO_X emissions summation and total fuel usage for all units under the source cap on a daily basis. Records must also be retained in accordance with §117.445 of this title (relating to Notification, Recordkeeping, and Reporting Requirements).

(e) The owner or operator of any units operating under this provision shall report any exceedance of the source cap emission limit within 48 hours to the appropriate regional office. The owner or operator shall then follow up within 21 days of the exceedance with a written report that includes 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. Additionally, the owner or operator shall submit semiannual reports for the monitoring systems in accordance with §117.445 of this title.

(f) The owner or operator shall demonstrate initial compliance with the source cap in accordance with the schedule specified in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(g) For compliance with §117.405 or §117.410 of this title, a unit that has been permanently retired or decommissioned and rendered inoperable may be included in the source cap under the following conditions.

(1) Permanent shutdowns must have occurred after December 31, 2012, for units subject to §117.405 of this title, and December 31, 2000, for units subject to §117.410 of this title.

(2) The source cap emission limit for retired units is calculated in accordance with subsection (b) of this section.

(3) The actual heat input must be calculated according to subsection (b)(1) of this section. If the unit was not in service 24 consecutive months between January 1, 2012, and December 31, 2013, for units subject to §117.405 of this title, and between January 1, 2000, and December 31, 2001, for units subject to §117.410 of this title, the actual heat input must be the average daily heat input for the continuous time period that the unit was in service, consistent with the heat input used to represent the unit's emissions in the 2012 modeling inventory for units subject to §117.405 of this title, and in the 2000 attainment demonstration modeling inventory for units subject to §117.410 of this title. The maximum heat input must be the maximum heat input, as certified to the executive director, allowed or possible (whichever is lower) in a 24-hour period.

(4) The owner or operator shall certify the unit's operational level and maximum rated capacity.

(5) Emission reductions from permanent 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.

(h) An owner or operator who chooses to use the source cap option shall include in the initial control plan, if required to be filed under §117.450 of this title (relating to Initial Control Plan Procedures), a plan for initial compliance. The owner or operator shall include in the initial control plan the identification of the election to use the source cap procedure as specified in this section to achieve compliance with this section and shall specifically identify all sources that will be included in the source cap. The owner or operator shall also include in the initial control plan the method of calculating the actual heat input for each unit included in the source cap, as specified in subsection (b)(1) of this section.

(i) For the purposes of determining compliance with the source 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, as measured by the initial demonstration of compliance, for that unit, unless the owner or operator provides data demonstrating to the satisfaction of the executive director that actual emissions were less than maximum emissions during such periods.

Adopted June 3, 2015 Effective June 25, 2015

~~**§117.425. Alternative Case Specific Specifications.**~~

~~(a) Where a person can demonstrate that an affected unit cannot attain the applicable requirements of the carbon monoxide (CO) or ammonia specifications of §117.405(d) of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410(c) of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstrations), the executive director may approve emission specifications different from the CO or ammonia specifications in §117.405(d) or §117.410(c) 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 specification the unit is capable of meeting after the application of controls to meet the nitrogen oxides emission specifications of §117.405 or §117.410 of this title, as applicable; 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 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.~~

~~Adopted June 3, 2015~~ ~~Effective June 25, 2015~~

§117.430. Operating Requirements.

(a) The owner or operator shall operate any unit subject to the source cap emission limits of §117.423 of this title (relating to Source Cap) in compliance with those limitations.

(b) All units subject to the emission specifications of §117.405 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) or §117.423 of this title must be operated so as to minimize nitrogen oxides (NO_X) emissions, consistent with the emission control techniques selected, over the unit's operating or load range during normal operations. Such operational requirements include the following.

(1) Each boiler, except for wood-fired boilers, must be operated with oxygen (O_2), carbon monoxide (CO), or fuel trim.

(2) Each boiler and process heater controlled with forced draft flue gas recirculation (FGR) to reduce NO_X emissions must be operated such that the proportional design rate of FGR is maintained, consistent with combustion stability, over the operating range.

(3) Each boiler and process heater controlled with induced draft FGR to reduce NO_X emissions must be operated such that the operation of FGR over the operating range is not restricted by artificial means.

(4) Each unit controlled with steam or water injection must be operated such that injection rates are maintained to limit NO_X concentrations to less than or equal to the NO_X concentrations achieved at maximum rated capacity (corrected to 15% O_2 on a dry basis for stationary gas turbines).

(5) Each unit 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.

(6) Each stationary internal combustion engine controlled with nonselective catalytic reduction must be equipped with an automatic air-fuel ratio (AFR) controller that operates on exhaust O_2 or CO control and maintains AFR in the range required to meet the engine's applicable emission specifications.

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

Adopted June 3, 2015 Effective June 25, 2015

§117.435. Initial Demonstration of Compliance.

(a) The owner or operator of any unit subject to the emission specifications of this division shall test the unit as follows.

(1) The unit must be tested for nitrogen oxides (NO_X), carbon monoxide (CO), and oxygen (O_2) emissions while firing gaseous fuel or, as applicable, liquid and solid fuel.

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

(3) Initial demonstration of compliance testing must be performed in accordance with the schedule specified in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(b) The initial demonstration of compliance tests required by subsection (a) of this section must use the methods referenced in subsection (d) or (e) of this section and must be used for determination of initial compliance with the emission specifications of this division. Test results must be reported in the units of the applicable emission specifications and averaging periods.

(c) Any continuous emissions monitoring system (CEMS) or any predictive emissions monitoring system (PEMS) required by §117.440 of this title (relating to Continuous Demonstration of Compliance) must be installed and operational before conducting 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 or system.

(d) Compliance with the emission specifications of this division for units operating without CEMS or PEMS must be demonstrated according to the requirements of §117.8000 of this title (relating to Stack Testing Requirements).

(e) Initial compliance with the emission specifications of this division for units operating with CEMS or PEMS in accordance with §117.440 of this title, must be demonstrated after monitor certification testing using the CEMS or PEMS as follows.

(1) For boilers and process heaters complying with a NO_X emission specification in pounds per million British thermal units (lb/MMBtu) on a rolling 30-day average, NO_X emissions from the unit are monitored for 30 successive unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission specification. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) For units complying with a NO_X emission specification on a block one-hour average, any one-hour period while operating at the maximum rated capacity, or as near thereto as practicable is used to determine compliance with the NO_X emission specification.

(3) For units complying with a CO emission specification, on a rolling 24-hour average, any 24-hour period is used to determine compliance with the CO emission specification.

(4) For units complying with §117.423 of this title (relating to Source Cap) a rolling 30-day average of total daily pounds of NO_X emissions from the units are monitored (or calculated in accordance with §117.423(c) of this title) for 30 successive source operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission limit. The 30-day average emission rate is calculated as the average of all daily emissions data recorded by the monitoring and recording system during the 30-day test period. There must be no exceedances of the maximum daily cap during the 30-day test period.

(f) Compliance stack test reports must include the information required in §117.8010 of this title (relating to Compliance Stack Test Reports).

Adopted June 3, 2015 Effective June 25, 2015

§117.440. Continuous Demonstration of Compliance.

(a) Totalizing fuel flow meters. The owner or operator of units listed in this subsection shall install, calibrate, maintain, and operate a totalizing fuel flow meter, with an accuracy of ± 5%, 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 owner or operator must continuously operate the totalizing fuel flow meter at least 95% of the time when the unit is operating during a calendar year. For the purpose of compliance with this subsection for units having pilot fuel supplied by a separate fuel system or from an unmonitored portion of the same fuel system, the fuel flow to pilots may be calculated using the manufacturer's design flow rates rather than measured with a fuel flow meter. The calculated pilot fuel flow rate must be added to the monitored fuel flow when fuel flow is totaled.

(1) The units are the following units subject to §117.405 (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstrations):

(A) boilers (excluding wood-fired boilers that must comply by maintaining records of fuel usage as required in §117.445(f) of this title (relating to Notification, Recordkeeping, and Reporting Requirements) or monitoring in accordance with paragraph (2)(A) of this subsection);

(B) process heaters;

(C) duct burners used in turbine exhaust ducts;

(D) stationary, reciprocating internal combustion engines;

(E) stationary gas turbines;

(F) lime kilns

(G) brick and ceramic kilns;

(H) heat treating furnaces;

(I) reheat furnaces;

(J) lead smelting blast (cupola) and reverberatory furnaces;

(K) glass and fiberglass/mineral wool melting furnaces;

(L) incinerators (excluding vapor streams resulting from vessel cleaning routed to an incinerator, provided that fuel usage is quantified using good engineering practices, including calculation methods in general use and accepted in new source review permitting in Texas. All other fuel and vapor streams must be monitored in accordance with this subsection);

(M) gas-fired glass, fiberglass, and mineral wool curing ovens;

(N) natural gas-fired ovens and heaters; and

(O) natural gas-fired dryers used in organic solvent, printing ink, clay, brick, ceramic, and calcining and vitrifying processes.

(2) The following are alternatives to the fuel flow monitoring requirements of paragraph (1) of this subsection.

(A) Units operating with a nitrogen oxides (NO_X) and diluent continuous emissions monitoring system (CEMS) under subsection (f) of this section may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(B) Units that vent to a common stack with a NO_X and diluent CEMS under subsection (f) of this section may use a single totalizing fuel flow meter.

(C) Diesel engines operating with run time meters may meet the fuel flow monitoring requirements of this subsection through monthly fuel use records maintained for each engine.

(D) Stationary reciprocating internal combustion engines and gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturers' recommended procedures.

(b) Oxygen (O_2) monitors.

(1) The owner or operator shall install, calibrate, maintain, and operate an O2 monitor to measure exhaust O2 concentration on the following units operated with an annual heat input greater than 2.2(1011) British thermal units per year (Btu/yr):

(A) boilers with a rated heat input greater than or equal to 100 million British thermal units per hour (MMBtu/hr); and

(B) process heaters with a rated heat input greater than or equal to 100 MMBtu/hr, except:

(i) as provided in subsection (g) of this section; and

(ii) for process heaters operating with a carbon dioxide (CO_2) CEMS for diluent monitoring under subsection (f) of this section.

(2) The O2 monitors required by this subsection are for process monitoring (predictive monitoring inputs, boiler trim, or process control) and are only required to meet the location specifications and quality assurance procedures referenced in subsection (f) of this section if O2 is the monitored diluent under that subsection. However, if new O2 monitors are required as a result of this subsection, the criteria in subsection (f) of this section should be considered the appropriate guidance for the location and calibration of the monitors.

(c) NO_X monitors.

(1) The owner or operator of units listed in this paragraph shall install, calibrate, maintain, and operate a CEMS or predictive emissions monitoring system (PEMS) to monitor exhaust NO_X. The units are:

(A) units with a rated heat input greater than or equal to 100 MMBtu/hr that are subject to §117.405(a) or (b) or §117.410(a) of this title;

(B) stationary gas turbines with a megawatt (MW) rating greater than or equal to 30 MW operated more than 850 hours per year;

(C) units that use a chemical reagent for reduction of NO_X;

(D) units that the owner or operator elects to comply with the NO_X emission specifications of §117.405(a) or (b) of this title or §117.410(a) of this title using a pound per MMBtu (lb/MMBtu) limit on a 30-day rolling average;

(E) lime kilns; and

(F) brick kilns and ceramic kilns.

(2) Units subject to the NO_X CEMS requirements of 40 CFR Part 75 are not required to install CEMS or PEMS under this subsection.

(3) 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:

(A) if the NO_X monitor is a CEMS:

(i) subject to 40 CFR Part 75, use the missing data procedures specified in 40 CFR Part 75, Subpart D (Missing Data Substitution Procedures); or

(ii) 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);

(B) use 40 CFR Part 75, Appendix E monitoring in accordance with §117.1340(d) of this title (relating to Continuous Demonstration of Compliance);

(C) if the NO_X monitor is a PEMS:

(i) use the methods specified in 40 CFR Part 75, Subpart D; or

(ii) use calculations in accordance with §117.8110(b) of this title (relating to Emission Monitoring System Requirements for Utility Electric Generation Sources); or

(D) the maximum block one-hour emission rate as measured during the initial demonstration of compliance required in §117.435(e) of this title (relating to Initial Demonstration of Compliance).

(d) Ammonia monitoring requirements. The owner or operator of any unit

subject to §117.405(a) or (b) or §117.410(a) of this title and the ammonia emission specification of §117.405(d)(2) or §117.410(c)(2) of this title shall monitor ammonia emissions from the unit according to the requirements of §117.8130 of this title (relating to Ammonia Monitoring).

(e) Carbon monoxide (CO) monitoring. The owner or operator shall monitor CO exhaust emissions from each unit listed in subsection (c)(1) of this section using one or more of the methods specified in §117.8120 of this title (relating to Carbon Monoxide (CO) Monitoring).

(f) CEMS requirements. The owner or operator of any CEMS used to meet a pollutant monitoring requirement of this section shall comply with the requirements of §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources).

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

(1) The PEMS must predict the pollutant emissions in the units of the applicable emission limitations of this division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(2) The PEMS must meet the requirements of §117.8100(b) of this title.

(h) Engine monitoring. The owner or operator of any stationary gas engine subject to the emission specifications of this division shall stack test engine NO_X and CO emissions as specified in §117.8140(a) of this title (relating to Emission Monitoring for Engines).

(i) Run time meters. The owner or operator of any stationary gas turbine or stationary internal combustion engine claimed exempt using the exemption of §117.403(a)(7)(D), (8), or (9) or (b)(2)(D) of this title (relating to Exemptions) shall record the operating time with a non-resettable elapsed run time meter.

(j) Data used for compliance. After the initial demonstration of compliance required by §117.435 of this title, the methods required in this section must be used to determine compliance with the emission specifications of §117.405(a) or (b) or §117.410(a) of this title. For enforcement purposes, the executive director may also use other commission compliance methods to determine whether the unit is in compliance with applicable emission specifications.

(k) Testing requirements.

(1) The owner or operator of units that are subject to the emission specifications of §117.405(a) or (b) or §117.410(a) of this title shall test the units as specified in §117.435 of this title in accordance with the applicable schedule specified in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(2) The owner or operator of any unit not equipped with CEMS or PEMS that are subject to the emission specifications of §117.405(a) or (b) of this title or §117.410(a) of this title shall retest the unit as specified in §117.435 of this title within 60 days after any modification that could reasonably be expected to increase the NO_X emission rate.

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§117.445. 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, the 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 of fuel burned; and the date, time, and duration of the procedure.

(b) Notification. The owner or operator of a unit subject to the emission specifications of §117.405(a) or (b) of this title (relating to Emission Specifications for Reasonably Available Control Technology) or §117.410(a) of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) shall submit written notification of any continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) relative accuracy test audit (RATA) conducted under §117.440 of this title (relating to Continuous Demonstration of Compliance) or any testing conducted under §117.435 of this title (relating to Initial Demonstration of Compliance) at least 15 days in advance of the date of the RATA or testing to the appropriate regional office and any local air pollution control agency having jurisdiction.

(c) Reporting of test results. The owner or operator of an affected unit shall furnish the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction a copy of any testing conducted under §117.435 of this title and any CEMS or PEMS RATA conducted under §117.440 of

this title:

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

(2) not later than the compliance schedule specified in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(d) Semiannual reports. The owner or operator of a unit required to install a CEMS or PEMS under §117.440 of this title shall report in writing to the executive director on a semiannual basis any exceedance of the applicable emission specifications of this division and the monitoring system performance. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. 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 units complying with §117.423 of this title (relating to Source Cap), excess emissions are each daily period that the total nitrogen oxides (NO_X) emissions exceed the rolling 30-day average or the maximum daily NO_X cap;

(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 when 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 or PEMS 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 unit operating time for the reporting period or the CEMS or PEMS downtime for the reporting period is greater than or equal to 5.0% of the total unit operating time for the reporting period, a summary report and an excess emission report must both be submitted.

(e) Reporting for engines. The owner or operator of any gas-fired engine subject to the emission specifications in §117.405 or §117.410 of this title shall report in writing to the executive director on a semiannual basis any excess emissions and the air-fuel ratio monitoring system performance. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. Written reports must include the following information:

(1) the magnitude of excess emissions (based on the quarterly emission checks of §117.430(b)(7) of this title (relating to Operating Requirements) and the biennial emission testing required for demonstration of emissions compliance in accordance with §117.440(h) of this title, computed in pounds per hour and grams per horsepower-hour, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the engine operating time during the reporting period; and

(2) specific identification, to the extent feasible, of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the engine or emission control system, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

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

(1) for each unit subject to §117.440(a) of this title, records of annual fuel usage;

(2) for each unit using a CEMS or PEMS in accordance with §117.440 of this title, monitoring records of:

(A) hourly emissions and fuel usage (or stack exhaust flow) for units complying with an emission specification enforced on a block one-hour average; or

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

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

(ii) pounds or tons per day;

(3) for each stationary internal combustion engine subject to the emission specifications of this division, records of:

(A) emissions measurements required by:

(i) §117.430(b)(7) of this title; and

(ii) §117.440(h) of this title;

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

(C) daily average horsepower and total daily hours of operation for each engine that the owner or operator elects to use the alternative monitoring system allowed under §117.440(a)(2)(D) of this title;

(4) for units claimed exempt from emission specifications using the exemption of §117.403(a)(7)(D), (8), or (9) or (b)(2)(D) of this title (relating to Exemptions), records of monthly hours of operation, for exemptions based on hours per year of operation. In addition, for each turbine or engine claimed exempt under §117.403(a)(7)(D) or (b)(2)(D) of this title, written records must be maintained of the purpose of turbine or engine operation and, if operation was for an emergency situation, identification of the type of emergency situation and the start and end times and date(s) of the emergency situation;

(5) records of ammonia measurements specified in §117.440(d) of this title;

(6) records of carbon monoxide measurements specified in §117.440(e) of this title;

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

(8) records of the results of performance testing, including initial demonstration of compliance testing conducted in accordance with §117.435 of this title;

(9) for each stationary diesel or dual-fuel engine, records of each time the engine is operated for testing and maintenance of the engine, including:

(A) date(s) of operation;

(B) start and end times of operation;

(C) identification of the engine; and

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

(10) for lime kilns that comply with the alternative site-wide production rate weighted average emission specification in §117.410(a)(7)(A)(ii) of this title, daily records of:

(A) average NO_X emission rates in pounds per ton (lb/ton) of calcium oxide (CaO) for each kiln;

(B) production rate of CaO for each kiln in tons per day; and

(C) site-wide production rate weighted average NO_X emission rate in lb/ton of CaO.

Adopted June 3, 2015 Effective June 25, 2015

§117.450. Initial Control Plan Procedures.

(a) The owner or operator of any unit at a major source of nitrogen oxides (NO_X) in the Dallas-Fort Worth eight-hour ozone nonattainment area that is subject to §117.405(a) or (b) of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410(a) of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) shall submit an initial control plan. The control plan must include:

(1) a list of all combustion units at the account that are listed in §117.405(a) or (b) or §117.410(a) of this title. The list must include for each unit:

(A) the maximum rated capacity;

(B) anticipated annual capacity factor;

(C) estimated or measured NO_X emission data in the units associated with the category of equipment from §117.405(a) or (b) or §117.410(a) of this title;

(D) the method of determination for the NO_X emission data required by subparagraph (C) of this paragraph;

(E) the facility identification number and emission point number as submitted to the Emissions Assessment Section of the commission; and

(F) the emission point number as listed on the Maximum Allowable Emissions Rate Table of any applicable commission permit;

(2) identification of all units with a claimed exemption from the emission specifications of §117.405(a) or (b) or §117.410(a) of this title and the rule basis for the claimed exemption;

(3) identification of the election to use the source cap emission limit as specified in §117.423 of this title (relating to Source Cap) to achieve compliance with this rule and a list of the units to be included in the source cap;

(4) a list of units to be controlled and the type of control to be applied for all such units, including an anticipated construction schedule;

(5) a list of units requiring operating modifications to comply with §117.430(b) of this title (relating to Operating Requirements) and the type of modification to be applied for all such units, including an anticipated construction schedule;

(6) for units required to install totalizing fuel flow meters in accordance with §117.440(a) of this title (relating to Continuous Demonstration of Compliance), indication of whether the devices are currently in operation, and if so, whether they have been installed as a result of the requirements of this chapter; and

(7) for units required to install continuous emissions monitoring systems or predictive emissions monitoring systems in accordance with §117.440 of this title, indication of whether the devices are currently in operation, and if so, whether they have been installed as a result of the requirements of this chapter.

(b) The initial control plan must be submitted to the Office of Compliance and Enforcement, the appropriate regional office, and the Office of Air by the applicable date specified for initial control plans in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

Adopted June 3, 2015 Effective June 25, 2015

§117.452. Final Control Plan Procedures for Reasonably Available Control Technology.

(a) The owner or operator of any unit subject to §117.405 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) at a major source of nitrogen oxides (NO_X) shall submit a final control report to show compliance with the requirements of §117.405 of this title. The report must include:

(1) the section used to demonstrate compliance, either:

(A) §117.405 of this title;

(B) §117.423 of this title (relating to Source Cap); or

(C) §117.9800 of this title (relating to Use of Emission Credits for Compliance);

(2) the method of NO_X control for each unit;

(3) the emissions measured by testing required in §117.435 of this title (relating to Initial Demonstration of Compliance);

(4) the submittal date, and whether sent to the central or the regional office (or both), of any compliance stack test report or monitor certification report required by §117.435 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 specification of §117.405 of this title.

(b) For sources complying with §117.423 of this title, in addition to the requirements of subsection (a) of this section, the owner or operator shall submit:

(1) the calculations used to calculate the 30-day average and maximum daily source cap allowable emission rates;

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

(A) the average daily heat input, H_i, specified in §117.423(b)(1) of this title;

(B) the maximum daily heat input, H_{mi}, specified in §117.423(b)(2) of this title;

(C) the method of monitoring emissions; and

(D) 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 values of Hi and Hmi, specified in §117.423(b)(1) and (2) of this title.

(c) The report must be submitted to the Office of Compliance and Enforcement, the appropriate regional office, and the Office of Air by the applicable date specified for final control plans in §117.9030(a) of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources). The plan must be updated with any emission compliance measurements submitted for units using continuous emissions monitoring system or predictive emissions monitoring system and complying with the source cap rolling 30-day average emission limit, according to the applicable schedule given in §117.9030(a) of this title.

Adopted June 3, 2015 Effective June 25, 2015

§117.454. Final Control Plan Procedures for Attainment Demonstration Emission Specifications.

(a) The owner or operator of any unit subject to §117.410 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration) at a major source of nitrogen oxides (NO_X) shall submit a final control report to show compliance with the requirements of §117.410 of this title. The report must include:

(1) the section used to demonstrate compliance, either:

(A) §117.410 of this title;

(B) §117.423 of this title (relating to Source Cap); or

(C) §117.9800 of this title (relating to Use of Emission Credits for Compliance);

(2) the method of NO_X control for each unit;

(3) the emissions measured by testing required in §117.435 of this title (relating to Initial Demonstration of Compliance);

(4) the submittal date, and whether sent to the central or the regional office (or both), of any compliance stack test report or monitor certification report required by §117.435 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 specification of §117.410 of this title.

(b) For sources complying with §117.423 of this title, in addition to the requirements of subsection (a) of this section, the owner or operator shall submit:

(1) the calculations used to calculate the 30-day average and maximum daily source cap allowable emission rates;

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

(A) the average daily heat input, H_i, specified in §117.423(b)(1) of this title;

(B) the maximum daily heat input, H_{mi}, specified in §117.423(b)(2) of this title;

(C) the method of monitoring emissions; and

(D) 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 values of Hi and Hmi, specified in §117.423(b)(1) and (2) of this title.

(c) The report must be submitted to the Office of Compliance and Enforcement, the appropriate regional office, and the Office of Air by the applicable date specified for final control plans in §117.9030 of this title (relating to Compliance Schedule for Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources). The plan must be updated with any emission compliance measurements submitted for units using continuous emissions monitoring system or predictive emissions monitoring system and complying with the source cap rolling 30-day average emission limit, according to the applicable schedule given in §117.9030 of this title.

Adopted June 3, 2015 Effective June 25, 2015

§117.456. 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 requirements and the final compliance dates of this division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Major Sources).

(1) For sources complying with §117.405 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)) or §117.410 of this title (relating to Emission Specifications for Eight-Hour Attainment Demonstration), replacement new units may be included in the control plan.

(2) For sources complying with §117.423 of this title (relating to Source Cap), any new unit must be included in the source cap, if the unit belongs to an equipment category that is included in the source cap.

(3) The revision of the final control plan is subject to the review and approval of the executive director.

Adopted June 3, 2015 Effective June 25, 2015