61-62.5

Standard No. 5.2

Control of Oxides of Nitrogen (NO_x)

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SECTION I - APPLICABILITY

(A) Except as provided in paragraph (B) of this part, the provisions of this regulation shall apply to any stationary source that emits or has the potential to emit oxides of nitrogen (NO_X) generated from fuel combustion. A stationary source becomes an affected source under this regulation upon meeting one or more of the criteria specified in paragraphs (A)(1), (A)(2), and (A)(3) below:

(1) Any new source that is constructed after June 25, 2004.

(2) Any existing source where a burner assembly is replaced with another burner assembly after the effective date of this regulation, regardless of size or age of the burner assembly to be replaced shall become an existing affected source and is subject to sections (V), (VI), and (VII) below. The replacement of individual components such as burner heads, nozzles, or windboxes does not trigger affected source status.

(3) Any existing source removed from its presently permitted facility (either from in-state or out-of-state) and moved to another permitted facility in-state after the effective date of this regulation shall be considered a new affected source. Any existing sources relocated between permitted facilities within the State under common ownership shall not become an existing affected source until Section I(A)(2) is triggered.

(B) Exemptions:

The following sources are exempt from all requirements of this regulation unless otherwise specified:

(1) Boilers of less than 10 million British thermal unit per hour (BTU/hr) rated input.

(2) Any source that qualifies as exempt under Regulation 61-62.1, II(B)(2) or II(B)(3).

(3) Any source with total uncontrolled potential to emit less than 5 tons per year of NO_X.

(4) Any source which has undergone a Best Available Control Technology (BACT) analysis or Lowest Achievable Emission Rate (LAER) for NO_X in accordance with Regulation 61-62.5, Standard No. 7, and 7.1, respectively.

(5) Any stationary internal combustion engine with a mechanical power output of less than two hundred (200) brake horsepower (bhp) or 149kW.

(6) Any device functioning solely as a combustion control device. Waste heat recovery from these combustion control devices shall not be considered primary grounds for exclusion from this exemption.

(7) Any equipment that has NO_X limits pursuant to the requirements of 40 Code of Federal Regulations (CFR) Parts 60, 61, or 63 where such limits are equivalent to, or more stringent than, the requirements of this regulation.

(8) Any source that has NO_X limits pursuant to the requirements of Regulation 61-62.96, where such limits are equivalent to, or more stringent than, the requirements of this regulation.

(9) Any source that has NO_X limits pursuant to the requirements of Regulation 61-62.97, Cross-State Air Pollution Rule (CSAPR) Trading Program, where such limits are equivalent to, or more stringent than, the requirements of this regulation.

(10) Any source that has NO_X limits pursuant to the requirements of Regulation 61-62.99.

(11) Air Curtain Incinerators.

(12) Engines Test Cells and/or Stands.

(13) Portable and temporary internal combustion (IC) engines such as those associated with generators, air compressors, or other applications provided that they fall in the categories listed in 40 CFR Part 89, (Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines), 40 CFR Part 1039 (Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines), and 40 CFR Part 1068 (General Compliance Provisions for Highway, Stationary, and Nonroad Programs).

(14) Combustion sources that operate at an annual capacity factor of ten (10) percent or less per year.

(15) Special use burners, such as startup/shutdown burners, that are operated less than 500 hours a year are exempt from the existing source replacement requirements.

(16) Liquor guns on a recovery boiler are only exempt from the standard requirements in Section IV below.

(17) Portable sources such as asphalt plants or concrete batch plants are considered existing sources only and become existing affected sources when the burner assembly is replaced under Section I(A)(2).

(18) The Department reserves the right to consider any other exemptions from this regulation on a case-by-case basis as appropriate.

SECTION II - DEFINITIONS

For the purposes of this regulation, the following definitions shall apply:

(A) Annual Capacity Factor: Means the ratio between the actual heat input to a combustion unit from the fuels during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.

(B) Burner Assembly: Means any complete, pre-engineered device that combines air (or oxygen) and fuel in a controlled manner and admits this mixture into a combustion chamber in such a way as to ensure safe and efficient combustion. A self-contained chamber such as is found on a combustion turbine is not a burner assembly for the purposes of this regulation.

(C) Case-by-Case NO_X Control: Means an emissions limitation based on the maximum degree of reduction for NO_X which would be emitted from any new source which the Department, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source through application of production processes or available methods, systems, and techniques.

In no event shall application of NO_X control result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard. If the Department determines that technological or economic limitations on the application of measurement methodology to a particular source would make the impositions of an emission standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of NO_X control. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(D) Combustion Control Device: Means, but is not limited to, any equipment that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere, excluding boilers, process heaters, dryers, furnaces, digesters, ovens, combustors, and similar combustion devices. Such equipment includes, but is not limited to, thermal oxidizers, catalytic oxidizers, and flares.

(E) Constructed: Means the on-site fabrication, erection, or installation of the NO_X emitting source.

(F) Equivalent Technology: Means any item that is identical or functionally equivalent to the existing component. This component may serve the same purpose or function as the replaced component, but may be different in some respects or improved in some ways.

(G) Existing affected source: Means sources constructed on or before June 25, 2004, and that meet the applicability requirements of Section I(A)(2).

(H) Fuel: Means the following fuels, any combination of the fuels or any combustible material the Department determines to be a fuel including, but not limited to:

(1) Virgin fuel, waste, waste fuel, and clean wood (biomass fuel) as defined in Regulation 61-62.1.

(2) Biodiesel: Means a mono-alkyl ester derived from vegetable oil and animal fat and conforming to ASTM D6751.

(3) Biofuel: Means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (for example, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds.

(4) Digester gas: Means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

(5) Fossil Fuel: Means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating useful heat. Petroleum for facilities constructed, reconstructed, or modified before May 4, 2011, means crude oil or a fuel derived from crude oil, including, but not limited to, distillate oil and residual oil. For units constructed, reconstructed, or modified after May 3, 2011, petroleum means crude oil or a fuel derived from crude oil, including, but not limited to, distillate oil, residual oil, and petroleum coke.

(6) Landfill Gas: Means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

(I) New affected source: Means any affected source which has been constructed after June 25, 2004, or meets the applicability requirements of Section I(A)(3). A new affected source will not be considered an existing affected source at burner assembly replacement under Section I(A)(2).

(J) Non-routine maintenance is an unforeseen failure of a single burner assembly in an existing affected source with multiple burner application forcing an unplanned replacement of the existing burner.

(K) Source: Means a stationary NO_X emission unit, comprised of one or more burners.

SECTION III - STANDARD REQUIREMENTS FOR NEW AFFECTED SOURCES

(A) Those affected sources as defined in Section I(A)(1) and (A)(3) above shall apply NO_X controls to achieve the limitations provided in Table 1 of this section. Unless otherwise noted, all emission limits for affected sources required to use Continuous Emissions Monitoring (CEMS) shall be based on thirty (30) day rolling averages.

(B) An affected source may request an alternate control limitation by submitting a demonstration that the alternate limitation is a Case-by-Case NO_X Control as defined in Section II above.

(C) The Department reserves the right to request that the owner or operator submit additional information for those affected sources that request alternate control limitation in accordance with Section III(B) above.

(D) Affected sources required to install post combustion technology for the control of NO_X shall be required to use post combustion for the control of NO_X during the ozone season.

Table 1 - NO_X Control Standards

Source Type	Emission Limit
Propane and/or Natural Gas-Fired Boilers	
≥10 million British thermal units per hour (MMBtu/hr) and < 100 MMBtu/hr	Low-NO_X Burners or equivalent technology, shall achieve 0.036 pounds per million British thermal units (lb/MMBtu)
≥100 MMBtu/hr	Low-NO_X Burners + Flue Gas Recirculation or equivalent technology, shall achieve 0.036 lb/MMBtu
Distillate Oil-Fired Boilers	
≥10 MMBtu/hr and < 100 MMBtu/hr	Low-NO_X Burners or equivalent technology, shall achieve 0.15 lb/MMBtu
≥100 MMBtu/hr	Low-NO_X Burners + Flue Gas Recirculation or equivalent technology, shall achieve 0.14 lb/MMBtu
Residual Oil-Fired Boilers	
≥10 MMBtu/hr and < 100 MMBtu/hr	Low-NO_X Burners or equivalent technology, shall achieve 0.3 lb/MMBtu

Source Type	Emission Limit
≥100 MMBtu/hr	Low-NO_X Burners + Flue Gas Recirculation or equivalent technology, shall achieve 0.3 lb/MMBtu
Multiple Fuel Boilers	
The emission limits for boilers burning multiple fuels are calculated in accordance with the formulas below. Additional fuels or combination of fuels not otherwise listed in this table shall be addressed on a case-by-case basis.	
≥10 MMBtu/hr and < 100 MMBtu/hr	E_n = [(0.036 lb/MMBtu H_{ng}) + (0.15 lb/MMBtu H_{do}) + (0.3 lb/MMBtu H_{ro}) + (0.35 lb/MMBtu H_c) + (0.2 lb/MMBtu H_w)]/(H_{ng} + H_{do}+ H_{ro} + H_c + H_w) where: E_n is the nitrogen oxides emission limit (expressed as nitrogen dioxide (NO_2)), ng/J (lb/million Btu), H_{ng} is the heat input from combustion of natural gas, and/or propane, H_{do} is the heat input from combustion of distillate oil, H_{ro} is the heat input from combustion of residual oil, H_c is the heat input from combustion of coal, and H_w is the heat input from combustion of wood residue.
≥100 MMBtu/hr	E_n = [(0.036 lb/MMBtu H_{ng}) + (0.14 lb/MMBtu H_{do}) + (0.3 lb/MMBtu H_{ro}) + (0.25 lb/MMBtu H_c) + (0.2 lb/MMBtu H_w)]/(H_{ng} + H_{do}+ H_{ro} + H_c + H_w) where: E_n is the nitrogen oxides emission limit (expressed as NO_2), ng/J (lb/million Btu), H_{ng} is the heat input from combustion of natural gas, and/or propane, H_{do} is the heat input from combustion of distillate oil, H_{ro} is the heat input from combustion of residual oil, H_c is the heat input from combustion of coal, and H_w is the heat input from combustion of wood residue.
Wood Residue Boilers	
All types	Combustion controls to minimize NO_X emissions or equivalent technology, shall achieve 0.20 lb/MMBtu
Coal-Fired Stoker Fed Boilers	
< 250 MMBtu/hr	Combustion controls to minimize NO_X emissions or equivalent technology, shall achieve 0.35 lb/MMBtu
≥ 250 MMBtu/hr	Combustion controls to minimize NO_X emissions or equivalent technology, shall achieve 0.25 lb/MMBtu
Pulverized Coal-Fired Boilers	
< 250 MMBtu/hr	Low-NO_X Burners + Combustion controls to minimize NO_X emissions or equivalent technology, shall achieve 0.35 lb/MMBtu

Source Type	Emission Limit
≥ 250 MMBtu/hr	Low-NO_X Burners + Combustion controls to minimize NO_X emissions + Selective Catalytic Reduction (SCR) or equivalent technology, shall achieve 0.14 lb/MMBtu
Municipal Refuse-Fired Boilers	
< 250 MMBtu/hr	Combustion modifications to minimize NO_X emissions + Flue Gas Recirculation or equivalent technology, shall achieve 195 ppmv at 12 percent CO_2 (0.35 lb/MMBtu)
≥ 250 MMBtu/hr	Staged Combustion and Automatic Combustion Air Control + SCR or equivalent technology, shall achieve 0.18 lb/MMBtu
Internal Combustion Engines	
Compression Ignition	Timing Retard ≤ 4 degrees + Turbocharger with Intercooler or equivalent technology, shall achieve 490 ppmv at 15 percent O_2 (7.64 gram per bhp-hour (gm/bhp-hr))
Spark Ignition	Lean-Burn Technology or equivalent technology, shall achieve 1.0 gm/bhp-hr
Landfill or Digester Gas-Fired	Lean-Burn Technology or equivalent technology, shall achieve 1.25 gm/bhp-hr
Gas Turbines	
Simple Cycle – Natural Gas	
< 50 Megawatts	Combustion Modifications (for example, dry low-NO_X combustors) to minimize NO_X emissions or equivalent technology, shall achieve 25 ppmv at 15 percent O_2 Dry Basis
≥ 50 Megawatts	Combustion Modifications (for example, dry low-NO_X combustors) to minimize NO_X emissions or equivalent technology, shall achieve 9.0 ppmv at 15 percent O_2 Dry Basis
Combined Cycle – Natural Gas	
< 50 Megawatts	Dry Low-NO_X Combustors or equivalent technology, shall achieve 9.0 ppmv at 15 percent O_2 Dry Basis
≥ 50 Megawatts	Dry Low-NO_X Combustors + SCR or equivalent technology, shall achieve 3.0 ppmv at 15 percent O_2 Dry Basis
Simple Cycle – Distillate Oil Combustion	
< 50 Megawatts	Combustion Modifications and water injection to minimize NO_X emissions or equivalent technology, shall achieve 42 ppmv at 15 percent O_2 Dry Basis
≥ 50 Megawatts	Combustion Modifications and water injection to minimize NO_X emissions or equivalent technology, shall achieve 42 ppmv at 15 percent O_2 Dry Basis
Combined Cycle - Distillate Oil Combustion	
< 50 Megawatts	Dry Low-NO_X Combustors with water injection or equivalent technology, shall achieve 42 ppmv at 15 percent O_2 Dry Basis
≥ 50 Megawatts	Dry Low-NO_X Combustors, water injection, and SCR or equivalent technology, shall achieve 10 ppmv at 15 percent O_2 Dry Basis

Source Type	Emission Limit
Landfill Gas-Fired	Water or steam injection or low-NO_X turbine design or equivalent technology, shall achieve 25 ppmv at 15 percent O_2 Dry Basis
Fluidized Bed Combustion (FBC) Boiler	
Bubbling Bed	Selective Non-catalytic Reduction (SNCR) shall achieve 0.15 lbs/MMBtu
Circulating Bed	SNCR shall achieve 0.07 lbs/MMBtu
Other	
Recovery Furnaces	Fourth (4th) level or air to recovery furnace/good combustion practices or equivalent technology, shall achieve 100 ppmv at 8 percent O_2 Dry Basis
Cement Kilns	Low-NO_X burners or equivalent technology, shall achieve 30 percent reduction from uncontrolled levels.
Lime Kilns	Combustion controls or equivalent technology, shall achieve 175 ppmv at 10 percent O_2 Dry Basis.
Fuel Combustion Sources burning any non-specified fuel not listed in Table above. (Examples include but are not limited to process heaters not meeting the definition of "boiler" in Regulation 61-62.1 Section I, dryers, furnaces, ovens, duct burners, incinerators, and smelters)	Low-NO_X burners or equivalent technology, shall achieve 30 percent reduction from uncontrolled levels.

SECTION IV - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS FOR NEW AFFECTED SOURCES

(A) Boilers

With the exception of fuel certification and tune-up requirements, compliance with required NO_X monitoring in 40 CFR Part 60 shall constitute compliance with the monitoring requirements in this section.

Affected sources that are not subject to 40 CFR Part 60 shall comply with the applicable requirements in this section.

(1) CEMS

(a) Except as allowed by the Department, the owner or operator of a boiler rated two hundred (200) MMBtu/hr or greater permitted for solid fuel, shall install, calibrate, maintain, and operate CEMS for measuring NO_X, and Oxygen (O_2) or Carbon Dioxide (CO_2) emissions discharged to the atmosphere, and shall record the output of the system.

(b) The CEMS required under this section shall be operated and data recorded during all periods of operation of the affected source except for CEMS breakdowns and repairs. Data is to be recorded during calibration checks and zero and span adjustments.

(c) The CEMS required under this section shall be installed, calibrated, maintained, and operated in accordance with approved methods in Regulation 61-62.60 or 61-62.72, or as approved by the Department.

(d) Excess Emissions

Excess emissions and monitoring systems performance reports shall be submitted semiannually. All reports shall be postmarked by the thirtieth (30th) day following the end of each six (6) month period. Written reports of excess emissions shall include the following information:

(i) The magnitude of excess emissions, any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, the process operating time during the reporting period.

(ii) Specific identification of each period of excess emissions that occurs during malfunctions of the affected source. The nature and cause of any malfunction (if known), the corrective action taken, or preventative measures adopted.

(iii) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(iv) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the reports.

(2) Periodic Monitoring and/or Source Test

(a) Unless required to operate a CEMS, testing requirements apply to boilers rated thirty (30) MMBtu/hr or greater or permitted for solid fuels and boilers rated greater than one hundred (100) MMBtu/hr permitted for any other fuels.

(b) Except as allowed by the Department, an initial source test for NO_X emissions shall be conducted within one hundred and eighty (180) days after startup.

(c) Periodic source tests for NO_X shall be conducted every twenty-four (24) months, or as determined by the Department on a case by case basis in the permit condition for the affected source. Source tests will be used to show compliance with the NO_X standard.

(d) The Department reserves the right to require periodic source testing for any affected sources. All source testing shall be conducted in accordance with Regulation 61-62.1, Section IV.

(3) Fuel Certification

The owner or operator shall record monthly records of the amounts and types of each fuel combusted and maintain these records on site.

(4) Tune-ups

If the owner or operator of a boiler is required to comply with federal tune-up requirements in 40 CFR Part 63, then the federal requirements shall meet the compliance requirements of this paragraph. If the owner or operator of a boiler is not subject to the federal tune-up requirements (40 CFR Part 63), then the following requirements are applicable:

(a) The first tune-up shall be conducted no more than twenty-four (24) months from start-up of operation for new affected sources.

(b) The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices.

(c) All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.

(d) The owner or operator shall develop and retain a tune-up plan on file.

(5) Other Requirements

The owner or operator shall maintain records of the occurrence and duration of any malfunction in the operation of an affected source; any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

(B) Internal Combustion Engines

With the exception of fuel certification and tune-up requirements, compliance with required NO_X monitoring in 40 CFR Part 60 shall constitute compliance with the monitoring requirements in this section.

Affected sources that are not subject to 40 CFR Part 60 shall comply with all applicable requirements in this section.

The owner or operator of an affected source shall comply with either (B)(1) or (B)(2) below.

(1) Manufacturer's Certification

(a) Operate and maintain the stationary internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(b) Change only those emission-related settings that are permitted by the manufacturer.

(2) Periodic Monitoring and/or Source Test

(a) Except as allowed by the Department, an initial source test for NO_X shall be conducted within one hundred eighty (180) days after startup.

(b) Periodic source tests for NO_X shall be conducted every twenty-four (24) months, or as determined by the Department on a case by case basis in the permit condition for the affected source. Source tests will be used to show compliance with the NO_X standard.

(c) The owner or operator shall operate the affected source(s) within the parameter(s) established during the most recent compliant source tests. A copy of the most recent Department issued source test summary letter(s) that established the parameter(s) shall be maintained with the required permit.

(d) The Department reserves the right to require periodic source testing for any affected sources. All source testing shall be conducted in accordance with Regulation 61-62.1, Section IV.

(3) Tune-Ups

If the owner or operator of an internal combustion engine is required to comply with federal requirements in 40 CFR Part 63 for the internal combustion engine, then the federal requirements shall meet the tune-up requirements of this section. If the owner or operator of an internal combustion engine is not subject to the federal tune-up requirements (40 CFR Part 63), then the following requirements are applicable:

(a) The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices.

(b) All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.

(c) The owner or operator shall develop and retain a tune-up plan on file.

(4) Fuel Certification

The owner or operator shall record monthly the amounts and types of each fuel combusted by the affected sources and maintain these records on site.

(5) Other Requirements

The owner or operator shall maintain records of the occurrence and duration of any malfunction in the operation of an affected source; any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

(C) Turbines

With the exception of fuel certification and tune-up requirements, compliance with required NO_X monitoring in 40 CFR Part 60 shall constitute compliance with the monitoring requirements in this section.

Affected sources that are not subject to 40 CFR Part 60 shall comply with all applicable requirements in this section.

The owner or operator of an affected source shall comply with either (C)(1) or (C)(2) below.

(1) CEMS

(a) Except as allowed by the Department, the owner or operator shall install, calibrate, maintain, and operate CEMS on the turbine for measuring NO_X, and Oxygen (O_2) or Carbon Dioxide (CO_2) emissions discharged to the atmosphere, and shall record the output of the system.

(b) The CEMS required under this section shall be operated and data recorded during all periods of operation of the affected source except for CEMS breakdowns and repairs. Data is to be recorded during calibration checks and zero and span adjustments.

(c) The CEMS required under this section shall be installed, calibrated, maintained, and operated in accordance with approved methods in Regulation 61-62.60 or 61-62.72, or as approved by the Department.

(d) Excess Emissions

Excess emissions and monitoring systems performance reports shall be submitted semiannually. All reports shall be postmarked by the thirtieth (30th) day following the end of each six (6) month period. Written reports of excess emissions shall include the following information:

(i) The magnitude of excess emissions, any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

(ii) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected source. The nature and cause of any malfunction (if known), the corrective action taken, or preventative measures adopted.

(iii) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(iv) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the reports.

(2) Parametric Monitoring

(a) Unless required to operate a CEMS, the owner or operator using water or steam injection to control NO_X shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine.

(b) Unless required to operate a CEMS, the owner or operator using a diffusion flame turbine without add-on selective catalytic reduction controls (SCR) to control NO_X, shall define at least four parameters indicative of the unit's NO_X formation characteristics and shall monitor these parameters continuously.

(c) Unless required to operate a CEMS, for any lean premix stationary combustion turbine, the owner or operator shall continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_X mode.

(d) Unless required to operate a CEMS, for any turbine that uses SCR to reduce NO_X, the owner or operator shall continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(3) Periodic Monitoring and/or Source Test

(a) This requirement only applies to turbines not required to operate a CEMS.

(b) The steam or water to fuel ratio or other parameters that are continuously monitored as described in this section shall be monitored during the performance test required under this section to establish acceptable values and ranges. The owner or operator may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations, and other relevant information to define the acceptable parametric ranges more precisely. The owner or operator shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_X emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations, and other relevant information shall be included in the monitoring plan.

(c) Except as allowed by the Department, an initial source test for NO_X emissions shall be conducted within one hundred eighty (180) days after startup.

(d) Periodic source tests for NO_X shall be conducted every twenty-four (24) months, or as determined by the Department on a case by case basis in the permit condition for the affected source. Source tests will be used to show compliance with the NO_X standard.

(e) The Department reserves the right to require periodic source testing for any affected sources. All source testing shall be conducted in accordance with Regulation 61-62.1, Section IV.

(4) Tune-Ups

(a) The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices.

(b) All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.

(c) The owner or operator shall develop and retain a tune-up plan on file.

(5) Fuel Certification

The owner or operator shall record monthly the amounts and types of each fuel combusted by the affected sources and maintain these records on site.

(6) Other Requirements

The owner or operator shall maintain records of the occurrence and duration of any malfunction in the operation of an affected source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(D) All Other Affected Source Types

With the exception of fuel certification and tune-up requirements, compliance with required NO_X monitoring in 40 CFR Part 60 shall constitute compliance with the monitoring requirements in this section.

If the owner or operator is not required to comply with federal requirements in 40 CFR Part 60 for monitoring NO_X, then the monitoring requirements for the affected source shall be established on a case by case basis.

(1) Tune-Ups

(a) The owner or operator of a combustion source shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices.

(b) All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.

(c) The owner or operator shall develop and retain a tune-up plan on file.

(2) Periodic Monitoring and/or Source Test

(a) Except as allowed by the Department, an initial source test for NO_X shall be conducted within one hundred eighty (180) days after startup.

(b) Periodic source tests for NO_X shall be conducted every twenty-four (24) months, or as determined by the Department on a case by case basis in the permit condition for the affected source. Source tests will be used to show compliance with the NO_X standard.

(c) The Department reserves the right to require periodic source tests for any affected sources. All source testing shall be conducted in accordance with Regulation 61-62.1, Section IV.

(3) Fuel Certification

The owner or operator shall record and maintain monthly records of the amounts and types of each fuel combusted by the affected sources and maintain these records on site.

(4) Other Requirements

The owner or operator shall maintain records of the occurrence and duration of any malfunction in the operation of an affected source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

SECTION V - STANDARD REQUIREMENTS FOR EXISTING AFFECTED SOURCES

(A) For those affected sources subject to the requirements of this regulation as defined in Section I(A)(2) above where an existing burner assembly is replaced after the effective date of this regulation, the burner assembly shall be replaced with a low-NO_X burner assembly or equivalent technology, and shall achieve a thirty (30) percent reduction from uncontrolled NO_X emission levels based upon manufacturer's specifications. An exemption from this requirement shall be granted when a single burner assembly is being replaced in an affected source with multiple burners due to non-routine maintenance.

(B) For those sources defined in Section I(A)(2) above where an existing burner assembly is replaced after the effective date of this regulation, the owner or operator shall notify and register the replacement with the Department in accordance with Section VI below.

(C) An affected source may request an alternative control methodology to the one specified in paragraph (A) above of this section provided that they can demonstrate to the Department why the NO_X control limits specified are not economically or technically feasible for this specific circumstance. The Department reserves the right to request that the owner or operator submit additional information as necessary for the alternative control methodology determination. Alternative control methodologies granted under this part are not effective until notification is submitted to and approved by the Department.

SECTION VI - NOTIFICATION REQUIREMENTS FOR EXISTING AFFECTED SOURCES

(A) Burner Assembly Replacement Notifications for Existing Affected Sources

(1) Except for those affected sources that wish to request an alternative control methodology as specified in Section V(C) above, the notification requirements specified in this section shall apply only to existing affected sources as defined in Section I(A)(2) above where an existing burner assembly is replaced after the effective date of this regulation.

(2) Within seven (7) days of replacing an existing burner assembly, the owner or operator shall submit written notification to register the replacement unit with the Department.

(3) Notification shall satisfy the permitting requirements consistent with Regulation 61-62.1, Section II(a).

(4) Notification shall contain replacement unit information as requested in the format provided by the Department. Replacement unit information shall include, at a minimum, all affected units at the source and the date the replacement unit(s) commenced operation.

(5) Those affected sources that wish to receive an emission reduction credit for the control device will be required to submit a permit application prior to replacement of the burner assembly(s).

SECTION VII – TUNE-UP REQUIREMENTS FOR EXISTING SOURCES

(A) The owner or operator shall perform tune-ups every twenty-four (24) months in accordance with manufacturer's specifications or with good engineering practices. Tune-ups shall be conducted no more than twenty-four (24) months from replacement of a burner assembly for affected existing sources. Each subsequent tune-up shall be conducted no more than twenty-four (24) months after the previous tune-up.

(B) All tune-up records are required to be maintained on site and available for inspection by the Department for a period of five (5) years from the date generated.

(C) The owner or operator shall develop and retain a tune-up plan on file.