NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION
NEW JERSEY ADMINISTRATIVE CODE
TITLE 7
CHAPTER 27
SUBCHAPTER 19

Control and Prohibition of Air Pollution from Oxides of Nitrogen

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7:27-19.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Air contaminant" means any substance, other than water or distillates of air, present in the atmosphere as solid particles, liquid particles, vapors or gases.

"Alter" means to effect an alteration of equipment or control apparatus.

"Alteration" means one of the following changes to equipment or control apparatus, or to a source operation, for which a permit has been issued:

1. If the equipment, control apparatus, or source operation is subject to preconstruction permit requirements, a change which requires a permit revision under N.J.A.C. 7:27-8.18; or

2. If the equipment, control apparatus, or source operation is at a facility for which an operating permit has been issued, a change which requires a minor modification or a significant modification of the permit under N.J.A.C. 7:27-22.23 or 24.

"Alternative maximum allowable emission rate" means a maximum allowable emission rate, set by the Department on a site-specific basis pursuant to N.J.A.C. 7:27-19.13.

"Ambient air quality standard" means a limit on the concentration of an air contaminant in the general outdoor atmosphere as set forth in N.J.A.C. 7:27-13 or 40 CFR 50.

"Anthracite coal" means coal that is classified as anthracite according to the ASTM Standard Specification for Classification of Coals by Rank, ASTM D 388-77, incorporated herein by reference, as amended or supplemented. This specification can be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

"Asphalt" means a solid, semisolid, or liquid material, produced by mixing bituminous substances together with gravel, crushed rock or similar materials, and used commonly as a coating or paving.

"Asphalt pavement production plant" means a batch type asphalt plant or drum mix asphalt plant operated to manufacture asphalt pavement.

"ASTM" means the American Society for Testing and Materials.

"Averaging" means complying with the requirements of this subchapter pursuant to N.J.A.C. 7:27-19.6, Emissions averaging.

"Averaging unit" means an individual source operation or item of equipment which is included in a designated set for the purpose of averaging pursuant to N.J.A.C. 7:27-19.6.

"Base year" means calendar year 1990 or other calendar year determined pursuant to N.J.A.C. 7:27-19.20(d)1, in connection with a plan for seasonal fuel switching.

"Batch type asphalt plant" means an asphalt plant where the aggregate and asphalt cement or other binder are mixed in equipment other than a rotary dryer.

"Bituminous coal" means coal that is classified as bituminous according to the ASTM Standard Specification for Classification of Coals by Rank, ASTM D 388-77, incorporated herein by reference, as amended or supplemented. This specification can be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

"Blown glass" means glassware shaped by blowing air into a molten glass gather.

"Borosilicate recipe" means a formula for making glass using 60 to 80 percent silicon dioxide, five to 35 percent boric oxides, and four to 23 percent other oxides.

"Boiler serving an electric generating unit" means a steam generating unit used for generating electricity including a unit serving a cogeneration facility.

"Brake horsepower" or **"bhp"** means a measure of mechanical power generated by a reciprocating engine determined by a brake attached to the shaft coupling.

"Brake horsepower-hour" or **"bhp-hr"** means a unit of energy or work, equal to the work done by a mechanism with a power output of one brake horsepower over a period of one hour.

"British thermal unit" or **"BTU"** means the quantity of heat required to raise the temperature of one avoirdupois pound of water one degree Fahrenheit at 39.1 degrees Fahrenheit.

"Calendar day" means the 24 hour period from 12:00 o'clock midnight to 12:00 o'clock midnight the following day.

"Carbon monoxide (CO)" means a colorless, odorless, tasteless gas at standard conditions, having a molecular composition of one carbon atom and one oxygen atom.

"Certificate" means either an operating certificate or a temporary operating certificate.

"CFR" means the United States Code of Federal Regulations.

"Class I renewable energy" means electric energy produced from solar technologies, photovoltaic technologies, wind energy, fuel cells, geothermal technologies, wave or tidal action,

methane gas from landfills and methane gas from a biomass facility that cultivates and harvests the biomass in a sustainable manner.

"Class II renewable energy" means electric energy produced at a resource recovery facility or hydro power facility, if the facility is located where retail competition is permitted, and if the Department has determined that the facility meets the highest environmental standards and minimizes any impacts to the environment and local communities.

"Clean Air Act" or **"CAA"** means the Federal Clean Air Act, 42 U.S.C. §§ 7401 et seq., as amended and supplemented.

"Clean distributed generation" means any piece of electric generating equipment that has been verified according to N.J.A.C. 7:27-8.2(f)2 to emit less than:

1. 0.40 pounds of NO_x per megawatt hour;

2. 0.25 pounds of CO per megawatt hour;

3. 0.10 pounds of PM per megawatt hour; and

4. 0.01 pounds of SO_2 per megawatt hour.

"Cleaner fuel" means a fuel other than a combustion source's primary fuel, the combustion of which results in a rate of NO_x emissions that is less than the rate of NO_x emissions when the primary fuel is combusted, all other circumstances being equal.

"Coal" means anthracite coal, bituminous coal, coke, lignite, nonbanded coal, and/or subbituminous coal.

"Coke" means a fused, cellular, porous substance that remains after free moisture and the major portion of the volatile materials have been distilled from bituminous coal and other carbonaceous material by heating it in the absence of air or with a limited supply of air.

"Combined cycle combustion turbine" means a combustion turbine that recovers heat from the turbine exhaust gases to heat water or generate steam.

"Combustion source" means a source operation or item of equipment which combusts fuel.

"Combustion turbine" means an internal combustion engine fueled by liquid or gaseous fuel, in which blades are driven by combustion gases to generate mechanical energy in the form of a rotating shaft that drives an electric generator or other industrial equipment.

"Commercial container glass" means clear or colored glass made of soda-lime recipe, which is formed into bottles, jars, ampoules or other containers, but does not include specialty container glass.

"Commercial fuel" means solid, liquid, or gaseous fuel which is ordinarily produced, manufactured, or sold for the purpose of creating heat.

"Comparable demand day" means, for any day in which an averaging unit is not operating, a day on which demand for electric power was within 10 percent of the demand on the day in question.

"Construction engine" means a mobile engine used for construction at a facility for a limited time period. Construction engine includes a mobile electric generator that is used until regular electric power lines are available to replace the function of the electric generator at the facility. Construction engine does not include:

1. An engine attached to a foundation;

2. An engine (including any replacement engines) at the same facility for more than 12 months;

3. An engine (including any replacement engines) at a seasonal source for at least 90 days per year for at least two years; or

4. An engine that is moved from one facility to another in an attempt to circumvent the residence time criteria in 2 or 3 above.

"Continuous emissions monitor" or **"CEM"** means a device that continuously measures the emissions from one or more source operations.

"Continuous monitoring system" or **"CMS"** means a system designed to continuously measure various parameters at a facility, which parameters may affect or relate to a facility's emissions. Components of a CMS include, but are not limited to, any continuous emissions monitor (CEM), continuous opacity monitor (COM), continuous process monitor (CPM), or any other constantly operating measuring device and recording device approved by the Department to perform one or more of the functions of a CMS. Ambient monitors, which measure the impact or concentration of air contaminants emitted by the source operation or facility in nearby areas, are not considered part of a facility's CMS.

"Control apparatus" means any device which prevents or controls the emission of any air contaminant directly or indirectly into the outdoor atmosphere.

"Criteria pollutant" means any air contaminant for which a NAAQS has been promulgated under 40 CFR 50 or for which a New Jersey Ambient Air Quality Standard has been promulgated in N.J.A.C. 7:27-13.

"Cyclone-fired boiler" means a boiler which combusts fuel in a horizontal water-cooled cylinder before releasing the combustion gases into the boiler.

"Delivery vessel" means any mobile storage tank including, but not limited to, tank trucks or railroad tank cars. This term does not include marine tank vessels.

"Demand response" means a measurable, verifiable load reduction that can be dispatched from a central location (for example, the distribution dispatch center PJM).

"Department" means the New Jersey Department of Environmental Protection.

"Designated set" means the averaging units which an owner or operator is authorized by the Department to include in an averaging plan pursuant to N.J.A.C. 7:27-19.6.

"Distillates of air" means helium (He), nitrogen (N_2), oxygen (O_2), neon (Ne), argon (Ar), krypton (Kr), and xenon (Xe).

"Dry bottom boiler serving an electric generating unit" means a boiler serving an electric generating unit in which ash is removed from the boiler in a solid state.

"Drum mix asphalt plant" means an asphalt plant where the asphalt cement or other binder is added to the aggregate while the aggregate is still in the rotary dryer.

"Dual fuel" means a type of burner capable of combusting more than one type of commercial fuel.

"Dual fuel engine" means compression ignited stationary internal combustion engine that is capable of burning liquid fuel and gaseous fuel.

"Duct burner" means an item of equipment used with a combustion turbine or a stationary reciprocating engine to increase the steam generating capacity of heat recovery steam generators. A duct burner consists of pipes and small burners that are placed in the exhaust duct upstream of the heat recovery steam generator; the duct burner allows firing of fuel to supplement or replace the exhaust heat energy of the turbine or engine. A duct burner is a type of indirect heat exchanger.

"Electric distribution company" means a public utility, as the term is defined in N.J.S.A. 48:2-13, that transmits or distributes electricity to end users within this State.

"Electric distribution system" means that portion of an electric system, which delivers electricity from transformation points on the transmission system to points of connection at a customer's premises. An electric distribution system generally carries less than 69 kilovolts of electricity.

"Electric generating unit" or **"EGU"** means a combustion or steam generating source used for generating electricity that delivers all or part of its power to the electric power distribution grid for commercial sale.

"Emergency" means any situation that arises from sudden and reasonably unforeseeable events beyond the control of an owner or operator of a facility, such as an unforeseen system capacity shortage caused by an act of God, that requires immediate corrective action to prevent system collapse or to restore normal operations at the facility.

"Emergency capacity" means the generation of electricity by an electric generating unit at a rate in excess of the unit's maximum normal power output rating. This maximum normal power output rating shall be that agreed upon by PJM and the owner or operator of the unit, and published by the owner or operator.

"Emergency generator" means a combustion source that:

1. Is located at a facility and produces mechanical or thermal energy, or electrical power exclusively for use at the facility; and

2. Is the source of mechanical or thermal energy, or electrical power when the primary source of energy is unavailable as a result of:

    i. A power disruption that results from construction, repair, or maintenance activity at the facility. Operation of the combustion source under this subparagraph is limited to 30 days in any calendar year, not including operation during the performance of normal testing and maintenance procedures, as provided at N.J.A.C. 7:27-19.2(d)1;

    ii. A power outage or failure of the primary source of mechanical or thermal energy because of an emergency; or

    iii. A voltage reduction issued by PJM and posted on the PJM internet website (www.pjm.com) under the "emergency procedures" menu.

"Energy efficiency measure" means a program that is aimed at reducing the electricity used by specific end-use devices and systems. Such savings are generally achieved by substituting technically more advanced equipment to produce the same level of end-use services (for example, lighting, heating and motor drive) with less electricity.

"EPA" means the United States Environmental Protection Agency.

"Equipment" means any device capable of causing the emission of an air contaminant either directly or indirectly to the outdoor atmosphere, and any stack or chimney, conduit, flue, duct, vent or similar device connected or attached to, or serving the equipment. This term includes, but is not limited to, a device in which the preponderance of the air contaminants emitted is caused by a manufacturing process.

"Face-fired boiler" means a furnace firing design in which the burners are mounted on one or more walls of the furnace.

"Facility" means the combination of all structures, buildings, equipment, storage tanks, source operations, and other operations located on one or more contiguous or adjacent properties owned or operated by the same person. This term does not include delivery vessels.

"Facility-wide permit" means a single permit issued by the Department to the owner or operator of a priority industrial facility incorporating the permits, certificates, registrations, or any other relevant Department approvals previously issued to the owner or operator of the priority industrial facility pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., and the appropriate provisions of the Pollution Prevention Plan prepared by the owner or operator of the priority industrial facility pursuant to N.J.S.A. 13:1D-41 and 42. This term shall have the same meaning as defined for the term "facility-wide permit" at N.J.A.C. 7:1K-1.5; if there is any conflict between the definition at N.J.A.C. 7:1K-1.5 and this one, the definition at N.J.A.C. 7:1K-1.5 shall control.

"Federally enforceable" means all limitations and conditions on operation, production, or emissions which can be enforced by EPA pursuant to authorities which include, but are not limited to, those established in:

1. Any standards of performance for new stationary sources (NSPS) promulgated at 40 CFR 60;

2. Any national emission standard for hazardous air pollutants (NESHAP) promulgated at 40 CFR 61;

3. Any provision of an applicable SIP;

4. Any permit issued pursuant to requirements established at 40 CFR 51, Subpart I; 40 CFR 52.21; 40 CFR 70; or 40 CFR 71; or

5. Any permit issued pursuant to requirements established under the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., and this chapter.

"Fiberglass" means material consisting of fine filaments of glass that are combined into yarn and woven or spun into fabrics, or that are used as reinforcement in other materials or in masses as thermal or as acoustical insulating products for the construction industry.

"Fixed capital cost" means the capital needed to provide all the depreciable components of a facility, item of equipment or source operation.

"Flat glass" means glass produced by the float, sheet, rolled or plate glass process and formed into windows, windshields, table tops or similar products.

"Fuel" means combustible material burned in boilers, furnaces or other machinery to generate heat or other forms of energy. This term includes commercial fuel and non-commercial fuel.

"Fuel-bound nitrogen" means the nitrogen content, in weight fraction, of a fuel.

"Fuel oil" means a liquid or liquefiable petroleum product burned for the generation of light, heat or power and derived directly or indirectly from crude oil.

"Gas" or **"gaseous fuel"** means any gaseous substance that can be used to create useful heat and/or mechanical energy.

"Glass" means a hard, amorphous inorganic substance made by fusing silicates, and sometimes borates and phosphates, with certain basic oxides.

"Glass manufacturing furnace" means equipment which uses heat for the production of glass.

"Glass removed" means the amount of glass coming out of a glass melting furnace, expressed in short tons per day.

"Heat input" means heat derived from the combustion of fuel put into any boiler, furnace or other piece of equipment. This term does not include the heat from preheated combustion air, recirculated flue gases or exhaust gases from other sources.

"Heavier than No. 2 fuel oil" means any fuel oil with an SSU viscosity greater than 45 at 100 degrees Fahrenheit.

"High electric demand day" or **"HEDD"** means the day following a day in which the next day forecast load is estimated to have a peak value of 52,000 megawatts or higher as predicted by the PJM Interconnection 0815 update to its Mid Atlantic Region Hour Ending Integrated Forecast Load, available from PJM Interconnection at http://oasis.pjm.com/doc/projload.txt.

"High electric demand day unit" or **"HEDD unit"** means an electrical generating unit, capable of generating 15 megawatts or more, that commenced operation prior to May 1, 2005, and that operated less than or equal to an average of 50 percent of the time during the ozone seasons of 2005 through 2007.

"Higher heating value" means the total heat obtained from the complete combustion of a fuel which is at 60 degrees Fahrenheit when combustion begins, and the combustion products of which are cooled to 60 degrees Fahrenheit before the quantity of heat released is measured.

"Incinerator" means any device, apparatus, equipment, or structure using combustion or pyrolysis for destroying, reducing or salvaging any material or substance, but does not include thermal or catalytic oxidizers used as control apparatus on manufacturing equipment. For the purposes of this subchapter, this term includes (without limitation) any thermal destruction facility which is a resource recovery facility, as such terms are defined in N.J.A.C. 7:26-1.4.

"Indirect heat exchanger" means equipment in which heat from the combustion of fuel is transferred by conduction through a heat-conducting material to a substance being heated, so that the latter is not contacted by, and adds nothing to, the products of combustion. Examples of indirect heat exchangers include boilers, duct burners and process heaters.

"Industrial/commercial/institutional boiler" or **"ICI boiler"** means an indirect heat exchanger that generates steam to supply heat to an industrial, commercial, or institutional operation. This term does not include boilers that serve electric generating units.

"Innovative control technology" means a NO_x control measure that has a substantial likelihood of achieving lower continuous levels of NO_x emissions than are required under this subchapter, but has not been adequately demonstrated and is not available to be implemented before May 31, 1995. An item of equipment or control apparatus, a change in a process, or a pollution prevention strategy may qualify as an innovative control technology.

"Internal combustion engine" means either a reciprocating engine or a combustion turbine in which power, produced by heat and/or pressure from combustion is converted to mechanical work.

"Interim period" means the period of time beginning on May 31, 1995, and ending when phased compliance under N.J.A.C. 7:27-19.21 or 19.23 is to be completed, or the period of time for phased compliance under N.J.A.C. 7:27-19.22 as indicated by 2 below, as applicable.

1. For purposes of phased compliance for repowering pursuant to N.J.A.C. 7:27-19.21, the interim period ends on the date when repowering of a combustion source is to be completed.

2. For purposes of phased compliance for reasons of practicability pursuant to N.J.A.C. 7:27-19.22, the interim period begins on May 19, 2009 and ends on the date when an owner or operator is to attain full compliance with this subchapter, but no later than May 19, 2010.

3. For purposes of phased compliance for innovative control technology pursuant to N.J.A.C. 7:27-19.23, the interim period ends on the date when the innovative control technology is to be fully implemented.

"KW" or **"kW"** means kilowatt.

"Lb/MMBTU" means pound per million British Thermal Units, which is based on higher heating value.

"Lean-burn engine" means a stationary reciprocating engine that operates at an air-to-fuel ratio that is fuel-lean of stoichiometric and that cannot operate with an exhaust oxygen concentration of less than one percent.

"Lignite" means coal that is classified as lignite A or B according to the ASTM Standard Specification for Classification of Coals by Rank, ASTM D 388-77, incorporated herein by reference, as amended or supplemented. This specification can be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

"Liquid particles" means particles which have volume but are not of rigid shape.

"Major NO_x facility" means any facility which has the potential to emit 25 or more tons of NO_x per year.

"Manufacturing process" means any action, operation or treatment embracing chemical, industrial, manufacturing, or processing factors, methods or forms including, but not limited to, furnaces, kettles, ovens, converters, cupolas, kilns, crucibles, stills, dryers, roasters, crushers, grinders, mixers, reactors, regenerators, separators, filters, reboilers, columns, classifiers, screens, quenchers, cookers, digesters, towers, washers, scrubbers, mills, condensers or absorbers.

"Maximum allowable emission rate" means the maximum amount of an air contaminant that may be emitted into the ambient air during one of the following:

1. A prescribed interval of time, such as one hour or one day;

2. Unit of activity, such as the burning of one gallon of fuel; or

3. Unit of output such as the generation of one megawatt hour of electricity.

"Maximum gross heat input rate" means the maximum amount of fuel a combustion source is able to combust in a given period as stated by the manufacturer of the combustion source. This term is expressed in BTUs per hour, based on the higher heating value of the fuel.

"MMBTU" means million British Thermal Units.

"Modify" or **"modification"** means any physical change, or change in the method of operation of existing equipment or control apparatus, that increases the amount of actual emission of any air contaminant emitted by that equipment or control apparatus or that results in the emission of any air contaminant not previously emitted. This term shall not include normal repair and maintenance.

"MW" means megawatt.

"MWh" means megawatt-hour.

"National Ambient Air Quality Standard (NAAQS)" means an ambient air quality standard promulgated at 40 CFR 50.

"Natural gas" means:

1. A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

2. Liquid petroleum gas, as defined by the ASTM Standard Specification for Liquid Petroleum Gases, D1835-82, incorporated herein by reference, as amended and supplemented. This specification can be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, P O Box C 700, West Conshohocken, PA 19428-2959.

"Natural gas reburning" means a control technology where natural gas is injected into a boiler downstream of the main combustion zone in order to reduce the amount of NO_x in the exhaust gas.

"NESHAP" means a National Emission Standard for a Hazardous Air Pollutant as promulgated under 40 CFR Part 61 or 40 CFR Part 63.

"Net energy output" means the gross output minus any of the energy output consumed to generate the output.

"Nitrogen dioxide (NO_2)" means a gaseous compound at standard conditions, having a molecular composition of one nitrogen atom and two oxygen atoms.

"Nitrogen oxide (NO)" means a gaseous compound at standard conditions, having a molecular composition of one nitrogen atom and one oxygen atom.

"Nonbanded coal" means coal that is classified as nonbanded according to the ASTM Standard Definition of Terms Relating to Megascopic Description of Coal and Coal Beds and Microscopical Description and Analysis of Coals, ASTM D 2796-77, incorporated herein by reference, as amended or supplemented. This document may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

"Non-commercial fuel" means solid, liquid or gaseous fuel which is not ordinarily produced, manufactured, or sold for the purpose of creating heat.

"Non-high electric demand day unit" or **"non-HEDD unit"** means an electrical generating unit, capable of generating 15 megawatts or more, that commenced operation prior to May 1, 2005, and that operated more than an average of 50 percent of the time during the ozone seasons of 2005 through 2007.

"No. 2 and lighter fuel oil" means any fuel oil with an SSU viscosity less than or equal to 45 at 100 degrees Fahrenheit.

"NSPS" means Standards of Performance for New Stationary Sources as promulgated under 40 CFR 60, commonly referred to as New Source Performance Standards.

"On-specification used oil" means used oil that meets the specifications established in the Recycling Rules at N.J.A.C. 7:26A-6.2(a).

"Operating certificate" or **"certificate"** means a "Certificate to Operate Control Apparatus or Equipment" issued by the Department pursuant to N.J.S.A. 26.2C-1 et seq., and in particular N.J.S.A. 26:2C-9.2, and implementing rules at N.J.A.C. 7:27-8.

"Operating permit" means the permit described in Title V of the Federal Clean Air Act, 42 U.S.C. §§ 7661 et seq., and in N.J.A.C. 7:27-22. This term shall include a general operating permit which is applicable facility wide, but does not include a general operating permit which applies only to a part of a facility. Where a general operating permit applies only to a part of a facility, the general operating permit shall be incorporated into the operating permit. This term also includes an operating permit issued for a temporary facility; for a facility subject to a MACT or GACT standard pursuant to N.J.A.C. 7:27-22.26; or for a component of a facility pursuant to N.J.A.C. 7:27-22.5(j).

"Output" means, with respect to an internal combustion engine, the shaft work output from the engine plus the energy reclaimed by any useful heat recovery system.

"Oxides of nitrogen (NO_x)" means all oxides of nitrogen, except nitrous oxide, as measured by test methods approved by the Department and EPA, such as the test methods set forth at 40 CFR 60 Appendix A Method 7E.

"Particles" means any material, except uncombined water, which exists as liquid particles or solid particles at standard conditions.

"Peak daily heat input rate," for a combustion source or for a designated set that has no operating history, means the maximum gross heat input rate of the source or of all the sources in the designated set. For a combustion source or for a designated set that has an operating history, "peak daily heat input rate" means the average of the daily heat inputs to a combustion source or to a designated set on the five days on which the heat input was highest, over the following period:

1. For a combustion source or for a designated set that has been operating for at least five years, the five years preceding the date on which the owner or operator applied to the Department for approval of an emissions averaging plan, pursuant to N.J.A.C. 7:27-19.6; and

2. For a combustion source that has been operating for less than five years, the entire period during which the combustion source has been operating.

"Permit" means preconstruction permit, operating permit, or facility-wide permit.

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships and joint stock companies, and shall also include, without limitation, all political subdivisions of this State or any agencies or instrumentalities thereof.

"Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.

"PJM Interconnection" or **"PJM"** means the regional transmission organization that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia, and the District of Columbia.

"Portable" means not attached to a permanent foundation, and designed and capable of being carried or moved from one location to another by means of wheels, skids, carrying handles, dolly, trailer, platform, or similar device.

"Potential to emit" means the capability of a source operation or of a facility to emit an air contaminant at maximum design capacity, except as constrained by any Federally enforceable condition. Such Federally enforceable conditions may include, but are not limited to, the effect of installed control apparatus, restrictions on the hours of operation, and restrictions on the type or amount of material combusted, stored, or processed.

"Pounds/MWh" means NO_x emissions in pounds per megawatt-hour of total net energy output, where total net energy output consists of electric output plus useful heat output.

"Power outage" means an interruption in the provision of electricity to customers because normally available sources of electrical energy are unavailable, provided the unavailability is due to circumstances beyond the control of the customer.

"Ppmv" means a measurement of the concentration of a specified substance in air, expressed as the number of parts of the specified substance per million parts of air, by volume, including the number of parts contributed by water.

"Ppmvd" means a measurement of the concentration of a specified substance in air, expressed as the number of parts of the specified substance per million parts of air, by volume, not including the number of parts contributed by water.

"Preconstruction permit" or **"permit"** means a "Permit to Construct, Install, or Alter Control Apparatus or Equipment" issued by the Department pursuant to N.J.S.A. 26C-1 et seq., in particular N.J.S.A. 26:2C-9.2, and implementing rules at N.J.A.C. 7:27-8.

"Pressed glass" means glassware formed by placing a blob of molten glass in a metal mold, then pressing it with a metal plunger or follower to form the inside shape. The resultant

piece, termed mold-pressed, has an interior form independent of the exterior, in contrast to mold-blown glass, in which the interior corresponds to the outer form.

"Primary fuel" means the fuel that provided the greatest heat input (expressed in BTU) to a combustion source in the base year.

"Process heater" means an item of equipment in which heat from fuel combustion is transferred to fluids contained in tubes without coming into contact with the fluid. A process heater is a type of indirect heat exchanger.

"Rated power output" means the maximum electrical or equivalent mechanical power output stated on the nameplate affixed to an engine or the International Standard Organization (ISO) rated electrical or equivalent mechanical power stated on the nameplate affixed to a turbine by the manufacturer.

"Rebricking" means the replacement of damaged or worn bricks of a glass manufacturing furnace while the furnace does not contain molten glass.

"Reciprocating engine" means an internal combustion engine in which a rotating crankshaft is driven by reciprocating motion of piston(s).

"Reconstruction" means the replacement of components of an existing facility, item of equipment or source operation to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct an entirely new facility, item of equipment or source operation.

"Refinery fuel gas" means gaseous fuel derived from the refining process and used as a fuel at the refinery where it was produced.

"Refining process" means the combination of physical and chemical operations including, but not limited to, distillation, cracking, and reformulation, performed on crude oil (or derivatives of crude oil) in order to produce petroleum products.

"Regenerative cycle combustion turbine" means a combustion turbine that recovers heat from its exhaust gases and uses that heat to preheat the inlet combustion air which is fed into the combustion turbine.

"Renewable energy" means class I renewable energy or class II renewable energy.

"Repowering" means the series of actions described in paragraphs 1 and 2 below by an owner or operator:

1. The permanent ceasing of the operations of the steam generator in a steam generating unit, the combustion turbine in a simple-cycle or combined-cycle combustion turbine, or any other combustion source; and

2. The installation in the State of a new combustion source or the purchase of heat or power from the owner of a new combustion source that is located in the State that:

   i. Has a maximum gross heat output rate that is at least 50 percent of the maximum gross heat output rate of the combustion source that is shut down under 1 above, or has a power output rate that is at least 50 percent of the power output rate of the combustion source that is shut down; and

   ii. Incorporates technology capable of controlling multiple combustion emissions simultaneously with improved fuel efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

"Rich-burn engine" means a stationary reciprocating engine that is not a lean-burn engine.

"Rotary dryer" means a cylindrical device, which rotates about an axis, through which hot gases are passed for the purpose of removing moisture from any solid.

"Sampling" means the selective collection of a quantity of raw materials, process intermediates, products, by-products or wastes.

"Selective noncatalytic reduction" or **"SNCR"** means a noncombustion technology that reduces NO_x emissions without a catalyst by injecting a reducing agent (such as ammonia, urea or cyanuric acid) into the flue gas, downstream of the combustion zone; the injection of the reducing agent converts NO_x to molecular nitrogen, water, and (if the reducing agent is urea or cyanuric acid) carbon dioxide (CO_2).

"Shed load" means the systematic reduction through prior arrangement of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations.

"Shift load" means the systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations, through prior arrangement programs designed to encourage consumers to move their use of electricity from on-peak time to off-peak times.

"Significant air quality impact level" means an increase, greater than or equal to that specified in Table 1 at N.J.A.C. 7:27-18.4, in the ambient air concentration of a criteria pollutant.

"Simple cycle combustion turbine" means a combustion turbine that does not recover heat from its exhaust gases.

"Soda lime recipe" means a formula for making glass using 60 to 75 percent silicon dioxide and 25 to 40 percent other oxides and no lead oxides.

"Solid particles" means particles of rigid shape and definite volume.

"Source emission testing" means the testing of a discharge of any air contaminant from equipment, control apparatus or source operation through any stack or chimney.

"Source operation" or **"source"** means any process or any identifiable part thereof, that emits or can reasonably be anticipated to emit any air contaminant either directly or indirectly into the outdoor atmosphere. A source operation may include one or more pieces of equipment or control apparatus.

"Specialty container glass" means clear or colored glass made of soda-lime recipe, which is produced to meet the specifications of any standard set forth by The United States Pharmacopeia or The National Formulary, incorporated herein by reference, and which is used for pharmaceutical, cosmetic or scientific purposes. The referenced specifications can be obtained from the United States Pharmacopeial Convention, Inc., 12601 Twinbrook Parkway, Rockville, MD 20852.

"SSU viscosity" means the number of seconds it takes 60 cubic centimeters of an oil to flow through the standard orifice of a Saybolt Universal viscometer at 100 degrees Fahrenheit.

"Stack or chimney" means a flue, conduit or opening designed, constructed, or used for the purpose of emitting any air contaminant into the outdoor atmosphere.

"Standard conditions" means 70 degrees Fahrenheit (21.1 degrees Celsius) and one atmosphere pressure (14.7 pounds per square inch absolute or 760.0 millimeters of mercury).

"State implementation plan" or **"SIP"** means a plan or portion thereof, or any revision thereto, prepared by a state and approved by the EPA pursuant to 42 U.S.C. § 7410, which includes enforceable emission limitations or other control measures, means or techniques, and provides for implementation, maintenance, and enforcement of one or more NAAQS.

"Stationary combustion turbine" means any simple cycle combustion turbine, regenerative cycle combustion turbine, or combustion turbine portion of a combined cycle steam/electric generating system that:

1. Is not self-propelled but may be mounted on a vehicle for portability; or

2. Is self-propelled on tracks at a facility, but does not in the course of its normal operation leave the facility.

"Stationary reciprocating engine" means an internal combustion engine that is a reciprocating engine that remains for more than 30 days at a single site (for example, any building, structure, facility, or installation), but does not include a mobile electric generator being used by the military, a locomotive engine or a construction engine. A stationary reciprocating engine:

1. Is not self-propelled, but may be mounted on a vehicle for portability; or

2. Is self-propelled on rails at a facility, but does not in the course of its normal operation leave the facility.

"Steam generating unit" means any furnace, boiler, or other device which combusts commercial fuel for the purpose of producing steam.

"Subbituminous coal" means coal that is classified as subbituminous according to the ASTM Standard Specification for Classification of Coals by Rank, ASTM D 388-77, incorporated herein by reference, as amended or supplemented. This document may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

"Tangential-fired boiler" means a furnace firing design where the burners are mounted at the corners of the furnace chamber.

"Testing" means a procedure for determining the kind and amount of one or more air contaminants, potential air contaminants or air contaminant precursors present. This term includes, but is not limited to, sampling, sample custody, analysis, and reporting of findings.

"Use" means to engage in any form or manner of operation of equipment or control apparatus subsequent to the installation of such equipment or control apparatus. This term includes any trial operation.

"Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use, is contaminated by physical or chemical impurities, or unused oil that is contaminated by physical or chemical impurities through storage or handling.

"Viscosity" means the measure of a fluid's resistance to flow.

"Volatile organic compound," or **"VOC,"** means a volatile organic compound as that term is defined by the EPA at 40 CFR 51.100(s), as supplemented or amended, which is incorporated by reference herein.

"Voltage reduction" means a reduction in customer supply voltage of at least five percent by an electric distribution company in order to reduce load on an electric distribution system.

"Wet bottom boiler" means a boiler serving an electric generating unit in which the ash is removed from the boiler in a molten state.

7:27-19.2 Purpose, scope and applicability

(a) This subchapter establishes requirements and procedures concerning the control and prohibition of air pollution by oxides of nitrogen. The general purpose of this subchapter

is to require the owner or operator of certain stationary source operations to use reasonably available control technology (RACT) to prevent or control NO_x emissions. EPA defines RACT to mean the lowest emission limitation that a particular source is capable of meeting by the application of air pollution control technology which is reasonably available considering technological and economic feasibility.

(b) The following types of equipment and source operations are subject to the provisions of this subchapter:

1. Any boiler serving an electric generating unit, located at a major NO_x facility;

2. Until March 7, 2007, any industrial/commercial/institutional boiler or other indirect heat exchanger that has a maximum gross heat input rate of at least 20 million BTUs per hour, located at a major NO_x facility. On and after March 7, 2007, the applicability of this subchapter to an industrial/commercial/institutional boiler or other indirect heat exchanger shall be determined by (c)1 below;

3. Until March 7, 2007, any stationary combustion turbine that has a maximum gross heat input rate of at least 30 million BTUs per hour, located at a major NO_x facility. On and after March 7, 2007, the applicability of this subchapter to an stationary combustion turbine shall be determined by (c)2 below;

4. Any stationary reciprocating engine capable of producing an output of 500 brake horsepower or more and located at a major NO_x facility. In addition, on and after March 7, 2007, the applicability of this subchapter to a stationary reciprocating engine or group of stationary reciprocating engines, used for generating electricity, shall be determined by (c)3 and 4 below;

5. Any rotary dryer located at an asphalt pavement production plant;

6. Any glass manufacturing furnace producing commercial container glass, and having a maximum potential production rate of at least 14 tons of glass removed from the furnace per day and having the potential to emit more than 10 tons of NO_x per year;

7. Any glass manufacturing furnace producing specialty container glass, and having a maximum potential production rate of at least seven tons of glass removed from the furnace per day and having the potential to emit more than 10 tons of NO_x per year;

8. Any glass manufacturing furnace producing borosilicate recipe glass, and having a maximum potential production rate of at least five tons of glass removed from the furnace per day, and having the potential to emit more than 10 tons of NO_x per year;

9. Any glass manufacturing furnace producing blown glass, fiberglass, flat glass, or pressed glass having the potential to emit more than 10 tons of NO_x per year;

10. Any municipal solid waste incinerator;

11. Any sewage sludge incinerator;

12. Any simple cycle combustion turbine combusting natural gas and compressing gaseous fuel at a major NO_x facility;

13. Any stationary reciprocating engine capable of producing an output of 200 bhp or more but less than 500 bhp, combusting natural gas, and compressing gaseous fuel at a major NO_x facility; and

14. Any other equipment or source operation not specifically listed at (b)1 through 13 above or (c) below that has the potential to emit more than 10 tons of NO_x per year.

(c) On and after March 7, 2007, in addition to the types of equipment and source operations listed at (b) above, the following types of equipment or source operations shall be subject to the provisions of this subchapter:

1. Any industrial/commercial/institutional boiler or other indirect heat exchanger that has a maximum gross heat input rate of at least five million BTU per hour, whether or not it is located at a major NO_x facility;

2. Any stationary combustion turbine that has a maximum gross heat input rate of at least 25 million BTU per hour, located at a major NO_x facility;

3. Any stationary reciprocating engine used for generating electricity, whether or not it is located at a major NO_x facility, that has a maximum rated power output of:

   i. One hundred forty-eight kilowatt or greater; or

   ii. Thirty-seven kilowatt or greater, if the engine has either commenced operation at the facility or is modified on or after March 7, 2007; and

4. Any group of two or more stationary reciprocating engines used for generating electricity, each of which has a maximum rated power output of 37 kW or greater, but less than 148 kW, and whose total combined power output is 148 kW or greater, whether or not the group of engines is located at a major NO_xfacility.

(d) Notwithstanding the provisions of (b) and (c) above, compliance with the recordkeeping requirements applicable to emergency generators set forth at N.J.A.C. 7:27-19.11 shall satisfy all requirements in this subchapter for any equipment that is solely used as an

emergency generator, as defined at N.J.A.C. 7:27-19.1. Emergency generators shall not be used:

1. Except as specified at paragraph 2 of the definition of emergency generator at N.J.A.C. 7:27-19.1, and during the performance of normal testing and maintenance procedures, as recommended in writing by the manufacturer and/or as required by a Federal or State statute or regulation;

2. For normal testing and maintenance under 1 above, except as set forth in this paragraph, on days when the Department forecasts air quality anywhere in New Jersey to be "unhealthy for sensitive groups," "unhealthy," or "very unhealthy" as defined in the EPA's Air Quality Index, at http://airnow.gov, incorporated herein by reference, as amended and supplemented, unless required in writing by a Federal or State law or regulation. Procedures for determining the air quality forecasts for New Jersey are available at the Department's air quality permitting web site at http://www.state.nj.us/dep/aqpp/aqforecast. However, public water systems, wastewater and stormwater systems, and sludge management facilities may perform normal testing and maintenance on their emergency generators, regardless of air quality, during the 48 hours prior to a National Weather Service-designated named storm impacting the facility's area of the State. These entities must notify the Department by calling the hotline at 1-877-WARN-DEP (1-877-927-6337) before conducting such normal testing and maintenance if the air quality forecast at http://www.njaqinow.net/ is unhealthy or worse; and

3. As a source of energy or power after the primary energy or power source has become operable again. If the primary energy or power source is under the control of the owner or operator of the emergency generator, the owner or operator shall make a reasonable, timely effort to repair the primary energy or power source.

(e) Notwithstanding the provisions of (b) and (c) above, this subchapter does not apply to any equipment or source operation for which the EPA determines (when the EPA approves a plan or plan revision) that net air quality benefits are greater in the absence of reductions of oxides of nitrogen from such equipment or source operation.

(f) The owner or operator of a facility containing any equipment or source operation listed in (b)1 through 8 above may apply to the Department for an exemption from this subchapter. The following conditions apply to such exemptions:

1. An owner or operator shall apply for such an exemption in accordance with the procedures set forth in N.J.A.C. 7:27-19.14;

2. The Department shall approve an exemption only if the facility satisfies the following requirements:

   i. The facility's potential to emit NO_x is less than 25 tons per year; and

ii. The facility's potential to emit NO_x on any calendar day from May 1 to September 30 is less than 137 pounds per day; and

3. If an exemption was approved for any equipment prior to June 6, 2000, but that equipment no longer qualifies for such an exemption due to amendments in this section operative on June 6, 2000, the owner or operator of such equipment shall comply with the requirements in this subchapter applicable to that equipment by October 6, 2001.

(g) Notwithstanding the provisions of (b) and (c) above, this subchapter does not apply to a stationary reciprocating engine that:

1. Is not connected to the electric power distribution grid;

2. Is not replacing power from the electric power distribution grid (for example, PJM demand curtailment program, peak shavings, demand response, or replacing power to equipment currently powered by the electric power distribution grid); and

3. Is portable and supplying power only to portable equipment.

7:27-19.3 General provisions

(a) Each owner and each operator of any equipment or source operation subject to this subchapter is responsible for ensuring compliance with all requirements of this subchapter. If there is more than one owner and operator of the equipment or source operation, each owner and each operator is jointly and severally liable for any penalties for violations of this subchapter.

(b) The emission limitations specified in this subchapter became operative on May 31, 1995, unless otherwise specified.

(c) For any alteration of equipment or source operations necessary to comply with the NO_x emission limits in this subchapter, which alteration does not involve a reconstruction of the equipment or source operation, the use of control measures which incorporate current advances in the art of air pollution control for those types of control measures shall be deemed to satisfy the requirements of N.J.A.C. 7:27-8.12 or 22.35. For example, if a boiler serving an electric generating unit achieves compliance with an emission limit under this subchapter by installing a low-NO_x burner, the requirements of N.J.A.C. 7:27-8.12 or 22.35 are satisfied if the low-NO_x burner installed incorporates current advances in the art of air pollution control for low-NO_x burners.

(d) By February 7, 2006, the owner or operator of any facility, equipment or source operation that is subject to NO_x emissions limit at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e) shall:

1. Apply for permits for all equipment and control apparatus necessary for compliance with this subchapter; and

2. If the owner or operator seeks to comply with this subchapter pursuant to the facility-specific NO_x emission limit provision of N.J.A.C. 7:27-19.13, submit to the Department a facility-specific NO_x control plan pursuant to N.J.A.C. 7:27-19.13.

(e) After receipt of a written request from an owner or operator for an extension of the deadline set forth in (d) above or after receipt of a written request from an owner or operator for an extension of the deadline set forth at N.J.A.C. 7:27-19.13(b)5, the Department will authorize one 90-day non-renewable deadline extension. Written requests for the extension of a deadline submitted pursuant to this subsection shall be addressed to:

Administrator
Air Compliance and Enforcement
Department of Environmental Protection
PO Box 422
401 East State Street, 4th Floor
Trenton, New Jersey 08625-0422

(f) In lieu of complying with the applicable emission limits set forth at N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9, 19.10 or 19.28, the owner or operator of any equipment or source operation listed in N.J.A.C. 7:27-19.2(b) may comply with one of the following, or with a combination of (f)1 and 3 below. The owner or operator of any equipment or source operation listed in N.J.A.C. 7:27-19.2(c) may comply with (f)1, 2 or 4 below. On and after May 1, 2015, the owner or operator of any HEDD unit shall not use the alternatives in this subsection to comply with any applicable maximum allowable emission rate at N.J.A.C. 7:27-19.4 or 19.5.

1. An emissions averaging plan approved by the Department pursuant to N.J.A.C. 7:27-19.6 and 19.14, which includes the combustion source in question as an averaging unit;

2. An alternative maximum allowable emission rate for the unit, approved by the Department pursuant to N.J.A.C. 7:27-19.13;

3. A seasonal fuel switching plan for the unit, approved by the Department pursuant to N.J.A.C. 7:27-19.14 and 19.20; or

4. A plan for phased compliance for the unit, approved by the Department pursuant to N.J.A.C. 7:27-19.14 and N.J.A.C. 7:27-19.21 or 19.23.

(g)-(h) (Reserved)

(*i*) The owner or operator of any facility, equipment or source operation which commences operation on or after January 23, 1994 shall ensure that such facility, equipment of source operation complies with the applicable requirement(s) of this subchapter from the date of commencement of operation or from the date the requirement is operative, whichever is later.

(j) A person required to provide a notice to the Department under this subchapter shall send the notice to the applicable address listed below:

1. If the notice concerns a combustion source located in Burlington County, Mercer County, Middlesex County, Monmouth County, or Ocean County, the person shall send the notice to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Central
   4 Station Plaza
   Mail Code 22-03A
   PO Box 420
   Trenton, NJ 08625-0420

2. If the notice concerns a combustion source located in Bergen County, Essex County, Hudson County, Hunterdon County, Morris County, Passaic County, Somerset County, Sussex County, Union County, or Warren County, the person shall send the notice to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Northern
   7 Ridgedale Avenue
   Cedar Knolls, NJ 07927

3. If notice concerns a combustion source located in Atlantic County, Camden County, Cape May County, Cumberland County, Gloucester County, or Salem County, the person shall send the notice to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Southern
   2 Riverside Drive, Suite 201
   Camden, NJ 08103-1013

4. If the notice concerns an averaging plan pursuant to N.J.A.C. 7:27-19.6, the person shall determine the county in which the averaging unit with the biggest potential to emit NO_x is located, and send the notice to the address applicable to that county under (j)1 through 3 above.

7:27-19.4 Boilers serving electric generating units

(a) The owner or operator of any boiler serving an electric generating unit shall cause it to emit NOx at a rate no greater than the applicable maximum allowable NOx emission rate specified in Tables 1, 2 and 3 below, as applicable, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f) or unless otherwise specified in an enforceable agreement with the Department. Table 1 is operative through December 14, 2012. Table 2 is operative starting December 15, 2012 through April 30, 2015, except that a coal-fired boiler serving an electric generating unit may be eligible for up to a one-year extension of the December 15, 2012 compliance date pursuant to (f) below. Table 3 is operative on and after May 1, 2015. A boiler serving an electric generating unit is also subject to the state-of-the-art requirements at N.J.A.C. 7:27-8.12 and 22.35, lowest achievable emission rate requirements at N.J.A.C. 7:27-18, and best available control technology requirements at 40 CFR 52.21, incorporated herein by reference, as applicable.

TABLE 1

(Operative through December 14, 2012)

Maximum Allowable NO_x Emission Rates for Boilers Serving Electric Generating Units

(pounds per million BTU)

	Firing Method		
Fuel/Boiler Type	**Tangential**	**Face**	**Cyclone**
Coal -Wet Bottom	1.0	1.0	0.60
Coal - Dry Bottom	0.38	0.45	0.55
Oil and/or Gas	0.20	0.28	0.43
Gas Only	0.20	0.20	0.43

TABLE 2

(Operative from December 15, 2012 through April 30, 2015)

Maximum Allowable NO_x Emission Rates for Boilers Serving Electric Generating Units

(pounds per megawatt hour)

	Firing Method		
Boiler Type	**Tangential**	**Face**	**Cyclone**
Coal	1.50	1.50	1.50
Oil and/or Gas	2.00	2.80	4.30
Gas only	2.00	2.00	4.30

TABLE 3

(Operative on and after May 1, 2015)

Maximum Allowable NO_x Emission Rates for Boilers Serving Electric Generating Units

(pounds per megawatt hour)

Fuel	
Coal	1.50
Heavier than No. 2 fuel oil	2.00
No. 2 and lighter fuel oil	1.00
Gas only	1.00

(b) The owner or operator of any boiler serving an electric generating unit shall install on the boiler a continuous emissions monitoring system satisfying the requirements of N.J.A.C. 7:27-19.18.

(c) The owner or operator of any boiler serving an electric generating unit shall adjust the boiler's combustion process before May 1st of each calendar year in accordance with N.J.A.C. 7:27-19.16, except the adjustment may occur within seven days of the first period of operation after May 1, if the boiler has not operated between January 1 and May 1 of that year.

(d) The owner or operator of a boiler serving an electric generating unit shall demonstrate compliance with its applicable maximum allowable NO_x emission rate in Table 2 or 3 as follows:

1. Using the methods at N.J.A.C. 7:27-19.15(a), any coal-fired boiler that is subject to an emission rate at Table 2 above shall demonstrate compliance with the maximum allowable NO_x emission rate in Table 2 either by June 15, 2013 or, if the boiler or control apparatus is altered to meet the Table 2 emission rate, by the date determined by N.J.A.C. 7:27-19.15(c), whichever date is earlier, and thereafter according to the schedule in the approved permit, except that a coal-fired boiler may be eligible for up to a one-year extension of the June 15, 2013 compliance demonstration date pursuant to (f) below; and

2. Using the methods at N.J.A.C. 7:27-19.15(a), any boiler that combusts any fuel other than coal and that is subject to an emission rate at Table 3 above shall demonstrate compliance with the applicable maximum allowable NO_x emission rate in Table 3 by November 1, 2015 or, if the boiler or control apparatus is altered to meet the applicable Table 3 emission rate, by the date determined by N.J.A.C. 7:27-19.15(c), whichever date is earlier, and thereafter according to the schedule in the approved permit.

(e) When calculating a 24-hour NO_x emission rate for an affected coal-fired unit, the owner or operator may exclude emissions from:

1. A unit that has ceased firing fossil fuel, the period of time, not to exceed eight hours, from initial firing of the unit until the unit is fired with coal and synchronized with a utility electric distribution system; and

2. A unit that is to be shut down, the period of time in which the unit is not longer synchronized with any utility electric distribution system and is no longer fired with coal.

(f) The owner or operator of a coal-fired boiler that is subject to Table 2 at (a) above may request up to a one-year extension past the December 15, 2012 Table 2 emission limit compliance deadline required at (a) and the June 15, 2013 compliance demonstration deadline required at (d)1 above by sending a written request to the address at N.J.A.C. 7:27-19.30(c)3. The request shall document the reasons the extension is needed. The Department will approve an extension request only if compliance by December 15, 2012 is not possible due to circumstances beyond the control of the owner or operator that are not reasonably foreseeable, including, but not limited to, the unavailability of a control apparatus needed to comply with the December 15, 2012 compliance deadline or a contractor needed to install the control apparatus.

(g) Each owner or operator identified at N.J.A.C. 7:27-19.29(a) shall submit to the Department a 2009 HEDD Emission Reduction Compliance Demonstration Protocol and annual reports pursuant to N.J.A.C. 7:27-19.29.

(h) Each owner or operator of a boiler serving an electric generating unit that is a HEDD unit shall submit to the Department a 2015 HEDD Emission Limit Achievement Plan and annual progress updates, as applicable, pursuant to N.J.A.C. 7:27-19.30.

7:27-19.5 Stationary combustion turbines

(a) The owner or operator of a simple cycle combustion turbine shall comply with (a)1 through 3 below, as applicable.

1. Until March 7, 2007, the owner or operator of any stationary simple cycle combustion turbine that has a maximum gross heat input rate of at least 30 million BTUs per hour shall cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 4 below, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

2. March 7, 2007 through May 19, 2009, the owner or operator of any simple cycle combustion turbine that has a maximum gross heat input rate of at least 25 million BTUs per hour and is a NO_x Budget source shall cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in

Table 4 below, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

3. May 20, 2009 through April 30, 2015, the owner or operator of any simple cycle combustion turbine that is a HEDD unit shall cause it to emit NO_x at a rate no greater than the lesser of the applicable maximum allowable NO_x emission rate specified in Table 4 below, or the maximum allowable NO_x emission rate contained in its preconstruction permit or operating permit, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

TABLE 4 [1]

Maximum Allowable NO_x Emission Rate for Simple Cycle Combustion Turbines

(Pounds per million BTU)

Fuel Used	**Maximum Allowable NO_x Emission Rate**
Oil	0.4
Gas	0.2

[1] Through March 6, 2007, Table 4 applies to any stationary simple cycle combustion turbine that has a maximum gross heat input rate of at least 30 MMBTU per hour.
March 7, 2007 through May 19, 2009, Table 4 applies to any simple cycle combustion turbine that has a maximum gross heat input rate of at least 25 million MMBTU per hour and is a NOx Budget source.
May 20, 2009 through April 30, 2015, Table 4 applies to any simple cycle combustion turbine that is a HEDD Unit.

(b) The owner or operator of a combined cycle combustion turbine or a regenerative cycle combustion turbine shall comply with (b)1 through 3 below, as applicable.

1. Until March 7, 2007, the owner or operator of any combined cycle combustion turbine or a regenerative cycle combustion turbine that has a maximum gross heat input rate of at least 30 million BTUs per hour shall cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 5 below, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

2. March 7, 2007 through May 19, 2009, the owner or operator of any combined cycle combustion turbine or a regenerative cycle combustion turbine that has a maximum gross heat input rate of at least 25 MMBTU per hour and is a NO_x Budget source shall cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 5 below, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

3. May 20, 2009 through April 30, 2015, the owner or operator of any combined cycle combustion turbine or a regenerative cycle combustion turbine that is a HEDD unit shall cause it to emit NO_x at a rate no greater than the lesser of the applicable maximum allowable NO_x emission rate specified in Table 5 below, or

the maximum allowable NO_x emission rate contained in its preconstruction permit or operating permit, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

TABLE 5 [1]

Maximum Allowable NO_x Emission Rate for Combined Cycle or Regenerative Cycle Combustion Turbines

(Pounds per million BTU)

Fuel Used	**Maximum Allowable NO_x Emission Rate**
Oil	0.35
Gas	0.15

[1] Through March 6, 2007, Table 5 shall apply to any combined cycle or regenerative cycle combustion turbine that has a maximum gross heat input rate of at least 30 MMBTU per hour.
March 7, 2007 through May 19, 2009, Table 5 shall apply to any combined cycle or regenerative cycle combustion turbine that has a maximum gross heat input rate of at least 25 MMBTU per hour and that is a NO_x Budget source.
May 20, 2009 through April 30, 2015, Table 5 shall apply to any combined cycle or regenerative cycle combustion turbine that is a HEDD Unit.

(c) In lieu of complying with the emission limits set forth in (a) and (b) above, the owner or operator of a stationary combustion turbine may comply with all of the following requirements:

1. The owner or operator of the stationary combustion turbine shall apply for and obtain the Department's written approval, in accordance with N.J.A.C. 7:27-19.14 and based on the standards in N.J.A.C. 7:27-19.14 and (c)2 and 3 below;

2. The owner or operator shall establish that there is an insufficient supply of water to the turbine suitable for NO_x emission control, due to either of the following circumstances beyond the control of the owner or operator:

   i. A legally enforceable limit on the amount of water which the owner or operator's facility may use; or

   ii. The need to provide for an alternate supply of water, because the existing supply is insufficiently filtered and de-ionized to be suitable for injection;

3. The owner or operator shall establish that there is no commercially available dry low-NO_x combustor suitable for use in the specific stationary combustion turbine;

4. The owner or operator shall maintain the Department's approval in effect;

5. The owner or operator shall comply with all conditions of the Department's approval; and

6. The owner or operator annually shall adjust the combustion process of the turbine in accordance with N.J.A.C. 7:27-19.16, before May 1 of each year.

(d) The owner or operator of a stationary combustion turbine shall:

1. On and after March 7, 2007 through May 19, 2009, if the stationary combustion turbine has a maximum gross heat input rate of at least 25 million BTU per hour and is not a NO_x budget source, cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 6 below, unless the owner or operator is complying with (c)1 through 5 above or N.J.A.C. 7:27-19.3(f); and

2. On and after May 20, 2009, if the stationary combustion turbine is a non-HEDD unit, cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 6 below, unless the owner or operator is complying with (c)1 through 5 above or N.J.A.C. 7:27-19.3(f).

TABLE 6 [1]

Maximum Allowable NO_x Emission Rate for Stationary Combustion Turbines

Type of Turbine	**Type of Fuel**	**Maximum Allowable NO_x Emission Rate**
Combined cycle combustion turbine or a regenerative cycle combustion turbine	Gas	1.3 pounds of NO_x per MWh
	Oil	2.0 pounds of NO_x per MWh
Simple cycle combustion turbine	Gas	2.2 pounds of NO_x per MWh
	Oil	3.0 pounds of NO_x per MWh

[1] March 7, 2007 through May 19, 2009, Table 6 applies to any stationary combustion turbine that has a maximum gross heat input rate of at least 25 million BTU per hour and that is not a NO_x Budget source.
On and after May 20, 2009, table 6 applies to any stationary combustion turbine that is a non-HEDD unit.

(e) The owner or operator of any stationary combustion turbine that has a maximum gross heat input rate of at least 25 million BTU per hour shall adjust the turbine's combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-19.16 and the following schedule:

1. For any stationary combustion turbine that has a maximum gross heat input rate of at least 25 million BTU but less than 30 million BTU per hour, according to manufacturer's recommended maintenance schedules beginning in 2007; or

2. For any stationary combustion turbine that has a maximum gross heat input rate of at least 30 million BTU per hour or greater, or required prior to November 7, 2005 to adjust the combustion process, according to manufacturer's recommended maintenance schedules.

(f) To calculate pounds/MWh for units where energy is used for other than electric generation, for example useful heat from a combined heat and power unit, that useful energy should be converted to equivalent MWh and added to the electric output. The pounds/MWh is based on net energy output, for both electric output and useful heat output.

(g) On and after May 1, 2015, the owner or operator of a stationary combustion turbine that is a HEDD unit or a stationary combustion turbine that is capable of generating 15 MW or more and that commenced operation on or after May 1, 2005 shall:

1. Cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 7 below; and

2. If the preconstruction permit or operating permit for such a combustion turbine allows it to combust either liquid fuel oil or gaseous fuel, cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate for gaseous fuel specified in Table 7 during operation on high electric demand days, regardless of the fuel combusted, unless combusting gaseous fuel is not possible due to gas curtailment.

TABLE 7 [1]

Maximum Allowable NO_x Emission Rate for any Stationary Combustion Turbine that is a HEDD Unit

(Pounds per megawatt hour)

Type of Turbine	**Type of Fuel**	**Maximum Allowable NO_x Emission Rate**
Combined cycle combustion turbine or a regenerative cycle combustion turbine	Gas	0.75 pounds of NO_x per MWh
	Oil	1.20 pounds of NO_x per MWh
Simple cycle combustion turbine	Gas	1.00 pounds of NO_x per MWh
	Oil	1.60 pounds of NO_x per MWh

[1] On and after May 1, 2015, Table 7 applies to any stationary combustion turbine that is a HEDD unit or a stationary combustion turbine that is capable of generating 15 MW or more and that commenced operation on or after May 1, 2005.

(h) Any stationary combustion turbine that is constructed, installed, reconstructed or modified is also subject to state-of-the-art requirements at N.J.A.C. 7:27-8.12 and 22.35, lowest achievable emission rate requirements at N.J.A.C. 7:27-18, and best available control technology requirements at 40 CFR 52.21, incorporated herein by reference, as applicable.

(*i*) The owner or operator of a stationary combustion turbine shall demonstrate compliance with the applicable maximum allowable NO_x emission rate pursuant to N.J.A.C. 7:27-19.15 in accordance with the following schedule:

1. For a non-HEDD turbine, compliance with the applicable maximum allowable NO_x emission rate in Table 6 shall be demonstrated by November 15, 2009, and thereafter according to the schedule in the approved permit. If, within the period May 19, 2004 to May 20, 2009, the owner or operator provided to the Department satisfactory compliance demonstration test results that comply with Table 6, the owner or operator shall be exempt from demonstrating compliance again prior to November 15, 2009; and

2. For a stationary combustion turbine that is subject to the emission rate(s) at (g) above compliance with the applicable maximum allowable NO_x emission rate in Table 7 shall be demonstrated by November 1, 2015, or, if the HEDD unit is altered to meet the Table 7 emission rate, by November 1, 2015 or the date determined by N.J.A.C. 7:27-19.15(c), whichever date is earlier, and thereafter according to the schedule in the approved permit.

(j) Each owner or operator identified at N.J.A.C. 7:27-19.29(a) shall submit to the Department a 2009 HEDD Emission Reduction Compliance Demonstration Protocol and annual reports pursuant to N.J.A.C. 7:27-19.29.

(k) Each owner or operator of a stationary combustion turbine that is a HEDD unit shall submit to the Department a 2015 HEDD Emission Limit Achievement Plan and annual progress updates, as applicable, pursuant to N.J.A.C. 7:27-19.30.

(*l*) Beginning November 6, 2019, any simple cycle combustion turbine combusting natural gas and compressing gaseous fuel at a major NO_x facility shall not emit more than 42 parts per million by volume, dry basis, (ppmvd) of NO_x, corrected to 15 percent oxygen.

7:27-19.6 Emissions averaging

(a) The Department may authorize an owner or operator to comply with an averaging plan approved by the Department pursuant to this section and N.J.A.C. 7:27-19.14. An owner or operator in compliance with such an approved averaging plan is not required to have each averaging unit comply with any emission limit set forth in this subchapter which would be applicable in the absence of an approved averaging plan.

(b) An owner or operator of two or more source operations or items of equipment may request that the Department authorize an averaging plan for two or more averaging units designated by the owner or operator. The owner or operator seeking authorization for averaging shall submit a written application to the Department in accordance with N.J.A.C. 7:27-19.14(a), (b) and (c). The owner or operator shall include the following information in the application:

1. Information sufficient to identify each averaging unit, including its location, a brief description of the unit (for example, "dry-bottom coal-fired boiler serving an electric generating unit" or "oil-fired simple-cycle combustion turbine"), its permit number, any other identifying numbers, and any other information

necessary to distinguish it from other equipment owned or operated by the applicant;

2. The maximum gross heat input rate of each averaging unit, expressed in BTUs per hour;

3. The type of fuel or fuels combusted in each averaging unit;

4. The maximum allowable NO_x emission rate which the owner or operator proposes to impose upon each averaging unit, expressed in pounds per million BTU;

5. The peak daily heat input rate of each averaging unit or of the designated set, expressed in MMBTU;

6. A demonstration that in operating at the peak daily heat input rate of all the averaging units together or of the designated set would satisfy the following equation:

$$TPEE \leq TPAE$$

Where:

i. TPEE means total peak estimated emissions and is equal to the sum of the peak estimated emissions for each averaging unit or the peak estimated emission of the designated set. The peak estimated emissions for each averaging unit equals the maximum emission rate listed in (b)4 above for that averaging unit, multiplied by the peak daily heat input rate listed in (b)5 above for that averaging unit. The peak estimated emissions of the designated set equals the sum of the maximum emission rates listed in (b)4 above for each averaging unit multiplied by the daily heat input rate to that averaging unit at the time of the peak daily heat input rate to the designated set as listed in (b)5 above; and

ii. TPAE means total peak allowable emissions, and is equal to the sum of the total peak allowable emissions for each averaging unit or the peak allowable emissions of the designated set. The peak allowable emissions for each averaging unit equals the applicable NO_x emission limit set forth in N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9, 19.10 or 19.20 for that averaging unit, multiplied by the peak daily heat input rate listed in (b)5 above for that averaging unit. The TPAE of the designated set means the applicable NO_x emission limit for each averaging unit multiplied by the heat input rate to that averaging unit at the time of the peak daily heat input rate to the designated set. For an averaging unit that is included in a seasonal fuel switching plan under N.J.A.C. 7:27-19.20, the applicable NO_x emission limit from May 1 through September 30 is the limit established under N.J.A.C. 7:27-19.20(d) or 19.20(g)3 as applicable, and

the applicable NO_x emission limit from October 1 through April 30 is the limit established under N.J.A.C. 7:27-19.20(g)4;

7. The method to be used to measure the actual NO_x emission rate of each averaging unit;

8. The name and phone number of the individual responsible for the recordkeeping required under (g) below; and

9. Any other information which the Department requests, which is reasonably necessary to enable it to determine whether the averaging units designated by the owner or operator will comply with the requirements of this section.

(c) The Department shall approve an averaging plan only if the following requirements are satisfied:

1. Each averaging unit can satisfy the maximum allowable NO_x emission rate which the owner or operator proposed under (b)4 above for that averaging unit;

2. The request for authorization satisfies all requirements of (b) above; and

3. The owner and operator of the averaging units to be included in the designated set enter into a Federally enforceable agreement with the Department (such as the inclusion of conditions in the applicable permits or operating certificates, or both), requiring any averaging unit for which the NO_x emission rate specified under (b)4 above is less than the applicable maximum allowable NO_x emission rate specified at N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9, 19.10 or 19.20 to continue to emit NO_x at a rate no greater than that specified under (b)4 above.

(d) The owner or operator of the designated set shall operate each unit in the designated set in compliance with the following:

1. The actual NO_x emissions from each averaging unit in the designated set, averaged over the appropriate time period specified in (f) below, shall not exceed the maximum allowable NO_x emission rate specified in (b)4 above for that averaging unit; and

2. The sum of the actual NO_x emissions from all averaging units in the designated set, averaged over the appropriate time period specified in (f) below, shall not exceed the sum of the allowable NO_x emissions for all averaging units in the designated set. The allowable NO_x emissions for each averaging unit is calculated according to the following formula:

$$\text{Allowable } NO_x \text{ emissions} = H \times AL$$

Where:

i. H means the actual heat input to the averaging unit during the appropriate time interval specified in (f) below. The heat input is expressed in millions of BTUs, based on the higher heating value of the fuel burned; and

ii. AL means the applicable NO_x emission limit set forth in N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9, 19.10 or 19.20 for that averaging unit, expressed in pounds of NO_x per million BTUs. For an averaging unit that is included in a seasonal fuel switching plan under N.J.A.C. 7:27-19.20, the applicable NO_x emission limit from May 1 through September 30 is the limit established under N.J.A.C. 7:27-19.20(g) 3, and the applicable NO_x emission limit from October 1 through April 30 is the limit established under N.J.A.C. 7:27-19.20(g)4.

(e) The owner or operator of the designated set shall calculate the actual NO_x emissions of each averaging unit using emissions data from a continuous emissions monitoring system satisfying the requirements of N.J.A.C. 7:27-19.18. The owner or operator may comply with this requirement using emissions data derived in accordance with a monitoring plan for limited installation of continuous emissions monitoring systems approved by the Department under N.J.A.C. 7:27-19.18(e).

(f) The owner or operator shall demonstrate compliance with this section as follows:

1. The owner or operator shall determine whether the operations of the designated set and of each averaging unit comply with this section for each calendar day during the period beginning May 1 and ending September 30 of each year. The owner or operator shall base the calculations required under (d)1 and 2 above upon the heat input and NO_x emissions for each averaging unit over the entire calendar day. The owner or operator shall perform the calculations and make a record of them within three working days after the date which is the subject of the calculation; and

2. The owner or operator shall determine whether the operations of the designated set and of each averaging unit comply with this section for the 30-day period ending on October 1 of each year, and the 30-day period ending on each subsequent day through April 30 of the following year. The owner or operator shall base the calculations required under (d)1 and 2 above upon the heat input and NO_x emissions for each averaging unit over the entire 30-day period. The owner or operator shall perform the calculations and make a record of them by the 15th day of each month, for all 30-day periods ending in the preceding month.

(g) The owner or operator of a designated set shall maintain the records listed below for five years from the date on which each record was made. The owner or operator shall maintain such records in a permanently bound log book or an electronic method, in a format that enables the Department to readily determine whether the designated set and

each averaging unit are in compliance. The owner or operator shall maintain the following records:

1. The unique identifier for each averaging unit included in the designated set as specified in (b)1 above;

2. The time period for which the data is being recorded;

3. The date upon which the data was recorded;

4. The amount, type and higher heating value of the fuel(s) consumed over the subject time period;

5. The amount of NO_x (expressed in pounds or tons) emitted by each averaging unit over the subject time period;

6. Whether the amount exceeds the allowable rate for the averaging unit specified under (b)4 above;

7. The sum of the amounts listed in (g)5 above for all averaging units;

8. The allowable NO_x emissions calculated pursuant to (d)2 above; and

9. Any other information required to be maintained as a condition of approval granted pursuant to (b) above.

(h) The owner or operator of a designated set shall submit quarterly reports to the Department on April 30, July 30, October 30 and January 30 of each year, for the immediately preceding calendar quarter ending March 31, June 30, September 30 and December 31, respectively. The owner or operator shall submit the report to the Department at the address set forth in (k) below. The owner or operator shall include the following information in the quarterly report:

1. The information listed in (g)2 and 3 above;

2. In the report for the quarter ending March 31, the compliance determination required under (f)2 above for each 30-day period ending on a calendar day within the quarter;

3. In the report for the quarter ending June 30:

   i. The compliance determination required under (f)2 above for each 30-day period ending on a calendar day from April 1 through May 14, inclusive; and

ii. The compliance determination required under (f)1 above for each calendar day from May 15 through June 30, inclusive;

4. In the report for the quarter ending September 30, the compliance determination required under (f)1 above for each calendar day from July 1 through September 30; and

5. In the report for the quarter ending December 31, the compliance determination required under (f)2 above for each 30-day period ending on a calendar day within the quarter.

(*i*) If the emissions from the designated set or from any averaging unit do not comply with (d) above for any time period described in (f) above, the owner or operator of the designated set shall deliver (as opposed to send) written notice of the non-compliance to the Department within two working days after the date on which the owner or operator was required to calculate compliance under (f) above. The owner or operator shall provide the notice in writing to the Regional Enforcement Officer, at the address specified at N.J.A.C. 7:27-19.3(i) for the county in which the averaging unit with the highest NO_x emission rate is located. The owner or operator shall include the following information in the notification:

1. The name of the owner or operator;

2. The name and telephone number of the person specified in (b)7 above;

3. All information required to be recorded under (h) above;

4. A statement of the reason(s) for the non-compliance, if known; and

5. Certification of the notification, in accordance with N.J.A.C. 7:27-1.39.

(j) An owner or operator of an averaging unit which cannot be operated due to sudden and reasonably unforeseeable circumstances beyond the control of the owner or operator, including, but not limited to, a Generator Forced/Unplanned Outage as defined by PJM Manual 35: Definitions and Acronyms, Revision: 14, Effective Date: October 21, 2008 at http://www.pjm.com/documents/manuals/ /media/documents/manuals/m35.ashx, which definition is incorporated herein by reference, as supplemented or amended, and for which the NO_x emission rate specified under (b)4 above is less than the applicable maximum allowable NO_x emission rate under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, or 19.10 shall take the following actions:

1. Within two working days after the averaging unit ceased operating, deliver (as opposed to send) written preliminary notice to the Department. This preliminary notice shall be followed up within 30 calendar days of the occurrence of the incident certifying the information in accordance with N.J.A.C. 7:27-1.39. In the

written notice, the owner or operator shall identify the unit which is or was not operating, and state why it is or was not operating;

2. If circumstances beyond the control of the owner or operator make it impracticable either to repair the averaging unit within 15 calendar days after it ceased operating, or to comply with the averaging plan without operating the unit (for example, through reducing the operations of another unit and purchasing electric power from another source), include in the notice described in (j)1 above an explanation of those circumstances and an estimate of the time required to repair the averaging unit; and

3. In determining whether the designated set is in compliance with (d)2 above, assume that the NO_x emissions and heat input for the non-operational averaging unit for each of the first 15 days of non-operation (or such longer period, not to exceed six months, as the Department determines is necessary to repair the averaging unit based on the information submitted under (j)2 above) are equal to the actual emissions and heat input for that unit on the most recent comparable demand day. For each day after the end of the period described above, assume that the NO_x emissions and heat input for the non-operational averaging unit are zero.

(k) A person required to submit a quarterly report to the Department under (h) above shall send the quarterly report to the applicable address listed below:

1. If the averaging unit with the highest NO_x emission limit is located in Burlington County, Mercer County, Middlesex County, Monmouth County, or Ocean County, the person shall send the quarterly report to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Central
   4 Station Plaza
   Mail Code 22-03A
   PO Box 420
   Trenton, NJ 08625-0420

2. If the averaging unit with the highest NO_x emission limit is located in Bergen County, Essex County, Hudson County, Hunterdon County, Morris County, Passaic County, Somerset County, Sussex County, Union County, or Warren County, the person shall send the quarterly report to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Northern
   7 Ridgedale Avenue
   Cedar Knolls, NJ 07927

3. If the averaging unit with the highest NO_x emission limit is located in Atlantic County, Camden County, Cape May County, Cumberland County, Gloucester County, or Salem County, the person shall send the quarterly report to:

   Department of Environmental Protection
   Bureau of Air Compliance & Enforcement - Southern
   2 Riverside Drive, Suite 201
   Camden, NJ 08103-1013

7:27-19.7 Industrial/commercial/institutional boilers and other indirect heat exchangers

(a)-(c) (Reserved)

(d) The owner or operator of any industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 250 million BTUs per hour shall install a continuous emissions monitoring system in accordance with N.J.A.C. 7:27-19.18.

(e)-(f) (Reserved)

(g) On and after March 7, 2007, the owner or operator of an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least five million BTU per hour, whether or not it is located at a major NO_x facility, shall adjust the combustion process annually in accordance with the procedure set forth at N.J.A.C. 7:27-19.16 and the following schedule:

1. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least five million BTU per hour, but less than 10 million BTU per hour, in the same quarter of each calendar year, beginning in 2010;

2. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 10 million BTU per hour, but less than 20 million BTU per hour, in the same quarter of each calendar year beginning in 2008;

3. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 20 million BTU per hour or greater, in the same quarter of each calendar year beginning in 2007; or

4. If the industrial/commercial /institutional boiler or other indirect heat exchanger is not operated during the quarter of the calendar year in which the annual adjustment is to be performed pursuant to (g)1, 2, or 3 above, the owner or

operator shall perform the adjustment within seven days after the boiler or other indirect heat exchanger is next operated.

(h) On and after March 7, 2007, the owner or operator of an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 50 million BTU per hour, located at a major NO_x facility, shall cause the boiler or other indirect heat exchanger to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 8 below, in accordance with the following, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f):

1. For an industrial/commercial/institutional boiler or other indirect heat exchanger that is not located at a petroleum refinery:

   i. The owner or operator shall cause the industrial/commercial/institutional boiler or other indirect heat exchanger to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 8 below through April 30, 2010, if compliance is achieved without physically modifying the boiler or other indirect heat exchanger; or

   ii. The owner or operator shall cause the industrial/commercial/institutional boiler of other indirect heat exchanger to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 8 below through April 30, 2011, if compliance is achieved by physically modifying the boiler or other indirect heat exchanger; and

2. For an industrial/commercial/institutional boiler or other indirect heat exchanger that is located at a petroleum refinery, the dates at (h)1 above shall not apply. The owner or operator shall cause the industrial/commercial/institutional boiler or other indirect heat exchanger to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 8 below.

TABLE 8
Maximum Allowable NOx Emission Rates for
Industrial/Commercial/Institutional Boilers or other Indirect Heat Exchangers
(pounds per million BTU)

Heat Input Rate		**Firing Method**		
(million BTU per hr)	**Fuel/Boiler Type**	**Tangential**	**Face**	**Cyclone**
at least 50 but < 100	Natural gas only	0.10	0.10	0.10
	No. 2 Fuel oil only	0.12	0.12	0.12
	Refinery fuel gas and other gaseous fuels	0.20	0.20	N/A
	Other liquid fuels	0.30	0.30	0.30
	Coal – Wet Bottom	1.0	1.0	0.55
	Coal – Dry Bottom	0.38	0.43	0.55

at least 100 or greater	Natural gas only	0.10	0.10	0.10
	Refinery fuel gas and other gaseous fuels	0.20	0.20	N/A
	Fuel oil and/or natural gas	0.20	0.28	0.43
	Coal – Wet Bottom	1.0	1.0	0.60
	Coal – Dry Bottom	0.38	0.45	0.55

(*i*) The owner or operator of an industrial/commercial/ institutional boiler or other indirect heat exchanger, with a maximum gross heat input rate of at least 25 million BTU per hour, whether or not it is located at a major NOx facility, but which is not located at a petroleum refinery, shall cause the boiler or other indirect heat exchanger to emit NOx at a rate no greater than the applicable maximum allowable NOx emission rate specified at Table 9 below in accordance with the following schedule, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f):

1. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 25 million BTU per hour, but less than 50 million BTU per hour:

   i. On and after May 1, 2011, if compliance is achieved without physically modifying the boiler or other indirect heat exchanger; or

   ii. On and after May 1, 2012, if compliance is achieved by physically modifying the boiler or other indirect heat exchanger; and

2. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 50 million BTU per hour:

   i. On and after May 1, 2010, if compliance is achieved without physically modifying the boiler or other indirect heat exchanger; or

   ii. On and after May 1, 2011 if compliance is achieved by physically modifying the boiler or other indirect heat exchanger.

TABLE 9

Maximum Allowable NO_x Emission Rates for Industrial/Commercial/ Institutional Boilers or Other Indirect Heat Exchangers Fired by Gas or Liquid Fuels
(pounds per million BTU)

Heat Input Rate (million BTU per hr)	**Fuel Type**	**Rate (pounds per million BTU)**
at least 25 but < 100	Natural gas only	0.05
	No. 2 Fuel oil only	0.08
	Other gaseous fuels (This does not include refinery fuel gas)	0.20

	Other liquid fuels	0.20
	Dual fuel using fuel oil and/or natural gas	0.12
	Natural gas only	0.10
	No. 2 Fuel oil only	0.10
at least 100 or greater	Other gaseous fuels (This does not include refinery fuel gas)	0.20
	Other liquid fuels	0.20
	Dual fuel using fuel oil and/or natural gas	0.20

7:27-19.8 Stationary reciprocating engines

(a) The owner or operator of a rich-burn stationary reciprocating engine capable of producing an output of 500 brake horsepower or greater, fueled by gaseous fuel, shall cause it to emit no more than 1.5 grams of NO_x per bhp-hr. Beginning March 7, 2007, a rich-burn stationary reciprocating engine capable of producing an output of 37 kW or greater, fueled by gaseous fuel, and used for generating electricity, is subject to (e) below, and not to this subsection.

(b) The owner or operator of a lean-burn stationary reciprocating engine capable of producing an output of 500 brake horsepower or greater, fueled by gaseous fuel, shall cause it to emit no more than 2.5 grams of NO_x per bhp-hr. Beginning March 7, 2007, a lean-burn stationary reciprocating engine capable of producing an output of 37 kW or greater, fueled by gaseous fuel, and used for generating electricity, is subject to (e) below, and not to this subsection.

(c) The owner or operator of a lean-burn stationary reciprocating engine capable of producing an output of 500 brake horsepower or greater, fueled by liquid fuel, shall cause it to emit no more than 8.0 grams of NO_x per bhp-hr. Beginning March 7, 2007, a lean-burn stationary reciprocating engine capable of producing an output of 37 kW or greater, fueled by liquid fuel, and used for generating electricity, is subject to (e) below, and not to this subsection.

(d) In lieu of complying with a NO_x emission limit under (a), (b) or (c) above, the owner or operator of a stationary reciprocating engine may comply with N.J.A.C. 7:27-19.3(f).

(e) On and after March 7, 2007, the owner or operator of a stationary reciprocating engine used for generating electricity whether or not it is located at a major NO_xfacility, shall meet the following requirements, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f):

1. For an engine that has a maximum rated power output of 148 kW or greater, cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 10 below;

TABLE 10

Maximum Allowable NO_x Emission Rates for Stationary Reciprocating Engines Applicable to Paragraph (e)1 above and (e)4 below Used for Generating Electricity

Engine/Fuel Type	**Maximum Allowable NO_x Emission Rate (grams per Bhp-hr)**
Rich - Burn fueled by Gaseous or Liquid Fuel	1.5
Lean – Burn fueled by Gaseous Fuel	1.5 or an emission rate which is equivalent to 80 percent NO_x reduction from the uncontrolled NO_X emission level
Lean-Burn fueled by Liquid Fuel	2.3
Lean-Burn fueled by Dual-Fuels (gas and liquid fuel)	2.3

2. For an engine that has a maximum rated power output of 37 kW or greater and that has commenced operation at the facility on or after March 7, 2007, cause it to emit NO_x at a rate no greater than 0.90 grams per bhp-hr;

3. For an engine that has a maximum rated power output of 37 kW or greater and that has been modified on or after March 7, 2007, cause it to emit NO_x at a rate no greater than 0.90 grams per bhp-hr or an emission rate which is equivalent to a 90 percent NO_x reduction from the uncontrolled NO_x emission level;

4. For a group of two or more stationary reciprocating engines, each of which has a rated power output of 37 kW or greater, but less than 148 kW, and whose total combined power output is 148 kW or greater, cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 10 above.

5. For a modified engine to take advantage of a percent reduction standard specified in Table 10 at (e)1 above, or (e)3 above in lieu of the default emission standard, the equivalent grams per bhp-hr limit must be incorporated into a Preconstruction Permit or Operating Permit. To support the permit application, a stack test conducted in accordance with N.J.A.C. 7:27-19.15(a)2, utilizing a protocol developed using the protocol templates in Technical Manual 1004, available at the Department's website at www.state.nj.us/dep/aqpp/techman.html, must be used to establish the baseline emission rate prior to modification. The engine must have had the combustion processes adjusted using the procedures at N.J.A.C. 7:27-19.16 prior to the stack test. The protocol and test results must be approved by the Bureau of Technical Services (BTS).

(f) The owner or operator of any stationary reciprocating engine that has a maximum rated power output of at least 37 kW or greater, used for generating electricity, and whether or not it is located at a major NO_x facility, shall adjust the engine's combustion process in

accordance with the procedures set forth at N.J.A.C. 7:27-19.16 and the following schedule:

1. For stationary reciprocating engine that has a maximum rated power output of at least 37 kW but less than 370 kW used for generating electricity, according to manufacturer's recommended maintenance schedules beginning in 2007: or

2. For stationary reciprocating engine that has a maximum rated power output of at least 370 kW or greater, or required prior to November 7, 2005 to adjust the combustion process, according to manufacturer's recommended maintenance schedules.

(g) Beginning November 6, 2019, the owner or operator of a two-stroke lean-burn engine capable of producing an output of 200 bhp or more but less than 500 bhp, combusting natural gas, and compressing gaseous fuel at a major NO_x facility shall cause it to emit no more than 3.0 grams of NO_x per bhp-hr.

(h) Beginning November 6, 2019, the owner or operator of a four-stroke lean-burn engine or four-stroke rich-burn engine capable of producing an output of 200 bhp or more but less than 500 bhp, combusting natural gas, and compressing gaseous fuel at a major NO_x facility shall cause it to emit no more than 2.0 grams of NO_x per bhp-hr.

7:27-19.9 Asphalt pavement production plants

(a) The owner or operator of an asphalt pavement production plant shall cause it to emit NO_X at a rate no greater than the applicable maximum allowable NO_x emission concentrations specified in Table 11 below, in accordance with the schedule specified at (f) below.

TABLE 11

Maximum Allowable NO_x Emission Concentrations for Asphalt Pavement Production Plants

(ppmvd at seven percent O_2)

Fuel Type	**NO_x Emission Concentration**
Natural gas	75
No. 2 fuel oil	100
No. 4 fuel oil, heavier fuel oils or on-specification used oil or any mixture of these three oils	125

(b) At least annually, the owner or operator of an asphalt pavement production plant subject to (a) above shall adjust the combustion process of the aggregate dryer in accordance with N.J.A.C. 7:27-19.16.

(c) In lieu of complying with a NO_x emission limit under (a) above, the owner or operator of an asphalt pavement production plant may comply with N.J.A.C. 7:27-19.3(f).

(d) The owner or operator of an asphalt pavement production plant shall perform the following best management practices:

1. Reduce aggregate moisture content by:

   i. Covering the aggregate stockpile to prevent high water content due to rain; or

   ii. Designing and operating stockpiles for water drainage and removing sand and aggregate from piles at a sufficient height above the base to avoid charging wet mix to the dryer;

2. Conduct monthly inspections of the flights in the dryer when the dryer is in use to determine the degree of wear and the need for replacement. If necessary, replace or modify a flight with an appropriate flight for the applicable combustion zone; and

3. Annually inspect the air system and repair air system leaks to minimize excess air.

(e) The owner or operator of an asphalt pavement production plant shall record and maintain onsite logs of the implementation of the best management practices required in (d) above. Each record shall be maintained in accordance with N.J.A.C. 7:27-19.19.

(f) The owner or operator of an asphalt pavement production plant shall comply with the NO_x emission concentrations at (a) above in accordance with the following schedule:

1. An asphalt pavement production dryer with a maximum gross heat input rate of less than 100 MMBTU/hr, shall comply:

   i. On and after May 1, 2011, if compliance is achieved without physically modifying the dryer; or

   ii. On and after May 1, 2012, if compliance is achieved by physically modifying the dryer.

2. An asphalt pavement production dryer with a maximum gross heat input of at least 100 MMBTU/hr, shall comply:

   i. On and after May 1, 2010, if compliance is achieved without physically modifying the dryer; or

   ii. On and after May 1, 2011, if compliance is achieved by physically modifying the dryer.

7:27-19.10 Glass manufacturing furnaces

(a) The owner or operator of any commercial container glass manufacturing furnace listed in N.J.A.C. 7:27-19.2(b)6, specialty container glass manufacturing furnace listed in N.J.A.C. 7:27-19.2(b)7, borosilicate recipe glass manufacturing furnace listed in N.J.A.C. 7:27-19.2(b)8, or pressed glass manufacturing furnace, blown glass manufacturing furnace or fiberglass manufacturing furnace listed in N.J.A.C. 7:27-19.2(b)9 shall cause the furnace to emit no more than 4.0 pounds of NO_x per ton of glass removed from the furnace.

(b) The owner or operator of any flat glass manufacturing furnace listed in N.J.A.C. 7:27-19.2(b)9 shall cause the furnace to emit no more than 9.2 pounds of NO_x per ton of glass removed from the furnace.

(c) (Reserved)

(d) A glass manufacturing furnace subject to this subchapter shall comply with the requirements of (a) and (b) above beginning on and after May 1, 2010 on the first date of startup after which rebricking of the furnace is completed.

(e) Beginning in calendar year 1994, the owner or operator of a glass manufacturing furnace subject to this subchapter shall adjust the combustion process of the furnace in accordance with N.J.A.C. 7:27-19.16 before May 1 of each calendar year.

(f) In lieu of complying with a NO_x emission limit under (a) or (b) above, the owner or operator of a glass manufacturing furnace may comply with one of the following, or with a combination of (f)1 and 3 below:

1. An emissions averaging plan approved by the Department pursuant to N.J.A.C. 7:27-19.6 and 19.14, which includes the combustion source in question as an averaging unit;

2. An alternative maximum allowable emission rate for the furnace, approved by the Department pursuant to N.J.A.C. 7:27-19.13; or

3. A seasonal fuel switching plan for the furnace, approved by the Department pursuant to N.J.A.C. 7:27-19.14 and 19.20.

7:27-19.11 Emergency generators - recordkeeping

(a) The owner or operator of an emergency generator with a maximum rated power output of 37 kW or greater, shall maintain on site and record in a logbook or computer data system, the following information:

1. Once per month, the total operating time from the generator's hour meter;

2. For each time the emergency generator is specifically operated for testing or maintenance:

   i. The reason for its operation;

   ii. The date(s) of operation and the start up and shut down time;

   iii. The total operating time for testing or maintenance based on the generator's hour meter; and

   iv. The name of the operator; and

3. If a voltage reduction is the reason for the use of the emergency generator, a copy of the voltage reduction notification from PJM or other documentation of the voltage reduction.

(b) The owner or operator of an emergency generator shall maintain the records required under (a) above for a period of no less than five years after the record was made and shall make the records readily available to the Department or the EPA upon request.

7:27-19.12 Municipal solid waste (MSW) incinerators

(a) The owner or operator of a MSW incinerator of any size shall cause it to emit NO_x at a maximum allowable emission concentration of 150 ppmvd at seven percent oxygen based on a calendar day average:

1. On and after July 18, 2009, if compliance is achieved by optimizing the existing NO_x air pollution control system without modifying the MSW incinerator; or

2. On and after May 1, 2011, if compliance is achieved by installing a new NO_x air pollution control system on an existing MSW incinerator or by physically modifying an existing MSW incinerator.

(b) In lieu of complying with the maximum allowable emissions concentration at (a) above, the owner or operator of a MSW incinerator may comply by obtaining an alternative maximum allowable NO_x emission rate approved by the Department pursuant to N.J.A.C. 7:27-19.13.

(c) The owner or operator of any MSW incinerator shall install a NO_x continuous emissions monitoring system on a MSW incinerator satisfying the requirements of N.J.A.C. 7:27-19.18 and shall demonstrate compliance with (a) or (b) above using the NO_x continuous emissions monitoring system.

7:27-19.13 Alternative and facility-specific NO_x emission limits

(a) This section establishes procedures and standards for the establishment of alternative maximum allowable NO_x emission rates, maximum allowable NO_x emission concentrations, or other NO_x regulatory parameters, and facility-specific maximum allowable NO_x emission rates, maximum allowable NO_x emission concentrations, or other NO_x regulatory parameters in the following circumstances:

1. If the owner or operator of a major NO_x facility seeks approval of a maximum allowable emission rate, maximum allowable emission concentration, or other regulatory parameter for any source operation or item of equipment of a category not listed in N.J.A.C. 7:27-19.2(b) or (c) that has the potential to emit more than 10 tons of NOx per year, except as provided in (p) below. Such a rate, concentration, or other limit approved by the Department pursuant to N.J.A.C. 7:27-19.13 shall be called a facility-specific NO_x emission limit (FSEL). The owner or operator shall obtain this FSEL by submitting a proposed facility-specific NO_x control plan pursuant to (b) below;

2. If the owner or operator of a source operation or item of equipment listed in N.J.A.C. 7:27-19.2(b) or (c) seeks approval of an alternative maximum allowable emission rate, alternative maximum allowable emission concentration, or other alternative regulatory parameter, which would apply to the equipment or source operation in lieu of the maximum allowable emission rate, maximum allowable emission concentration, or other regulatory parameter, respectively, that would otherwise apply under this subchapter. The owner or operator shall obtain this alternative rate, alternative concentration or other alternative limit by submitting a request for an alternative emission limit (AEL) pursuant to (b) below; or

3. If the owner or operator of a source operation or item of equipment was issued a facility-specific or an alternative emissions limit for that source operation or item of equipment prior to May 1, 2005, and if the owner or operator would like to continue to operate under this limit, the owner or operator shall submit a proposed facility-specific NO_x control plan or a request for an alternative emission limit, as applicable, pursuant to (b) below.

(b) The owner or operator of a facility described in (a) above shall obtain the Department's written approval of a facility-specific NO_x control plan or an alternative emission limit as follows:

1. Any facility-specific NO_x control plan, including the facility-specific emission limit, approved by the Department after May 19, 2009 shall not have an expiration date, except in accordance with (b)6 and (j) below;

2. Any alternative emission limit approved by the Department after May 19, 2009 shall have a term of 10 years, unless the source operation or item of equipment with the alternative emission limit is modified, altered or reconstructed during the

term of the plan. If the source operation or item is modified, altered or reconstructed, (b)6 or (k) below, as applicable shall also apply;

3. Any owner or operator in (a)1 shall submit to the Department in writing a proposed facility-specific NO_x control plan for the facility. In the proposed facility-specific NO_x control plan, the owner or operator shall include:

   i. A list of each source operation or item of equipment at the facility that has the potential to emit more than 10 tons of NO_x per year and is not listed in N.J.A.C. 7:27-19.2(b) or (c). In the list, the owner or operator shall briefly describe the source operation or item of equipment, and list its permit number and any other identifying numbers; and

   ii. The information listed in (d) below.

4. Any owner or operator of a facility described in (a)2 above shall submit to the Department a written request for an alternative emission limit for each applicable source operation or item of equipment. In the request, the owner or operator shall include the information listed in (c) below;

5. Any owner or operator of a facility described in (a)3 above shall submit to the Department a written request for an alternative emission limit or a proposed facility-specific NO_x control plan by August 17, 2009. The owner or operator may request a 90-day extension pursuant to N.J.A.C. 7:27-19.3(e) to submit the request or proposed plan;

   i. In the proposed facility-specific NO_x control plan, the owner or operator shall include the information listed at (b)3i and ii above. In a request for an alternative emission limit, the owner or operator shall include the information listed at (c) below;

   ii. If the owner or operator submits a request or proposed plan by August 17, 2009 or by the date of any extension approved by the Department, the owner or operator's existing alternative emission limit or facility-specific emission limit, as applicable, shall terminate on the date stated in the implementation schedule of the request or proposed plan that the Department approves; and

   iii. If the owner or operator does not submit a request or proposed plan or extension request by August 17, 2009, the owner or operator's existing alternative emission limit emission rate or facility-specific emission limit shall terminate on August 17, 2009;

6. If the owner or operator of a facility has an approved alternative emission limit or an approved facility-specific emission limit for a source operation or item of equipment, and intends to modify, alter or reconstruct that source operation or

item of equipment, such that the alternative or facility-specific emission limit would change, the existing alternative or facility-specific emission limit shall terminate on the start-up date of the modified, altered or reconstructed source operation or item of equipment. If the owner or operator plans to continue operating under an alternative or facility-specific emission limit, the owner or operator shall, pursuant to this section, apply for and obtain approval of a new alternative emission limit or facility-specific NO_x control plan prior to operation of the modified, altered or reconstructed source operation or item of equipment; and

7. If the owner or operator of a facility that has an approved 10-year term alternative emission limit plans to continue operating under an alternative emission limit beyond the existing limit's expiration date, the owner or operator shall submit a request for a new alternative emission limit at least one year prior to the termination date of the existing alternative emission limit. The existing alternative emission limit shall terminate on its termination date or on the date of the Department's final action on the proposed new alternative emission limit, whichever is later.

(c) The owner or operator of a source operation or item of equipment listed in N.J.A.C. 7:27-19.2(b) may request approval of an alternative emission limit in accordance with this section. In the request, the owner or operator shall include:

1. A brief description of the equipment or source operation which is the subject of the request, and its permit number and any other identifying numbers;

2. A demonstration that the source operation or item of equipment is not reasonably able to comply with this subchapter through any alternative means of compliance established under this subchapter (for example, through seasonal combustion of natural gas pursuant to N.J.A.C. 7:27-19.4(b), or through compliance with an averaging plan under N.J.A.C. 7:27-19.6); and

3. The information listed in (d) below.

(d) In addition to the information required under (b) or (c) above, as applicable, the owner or operator shall include the following information in a proposed facility-specific NO_x control plan or request for an alternative emission limit:

1. For each source operation or item of equipment listed in (b)3i above or (c)1 above, as applicable, a list of all NO_x control technologies available for use with the equipment or source operation;

2. An analysis of the technological feasibility of installing and operating each control technology identified in (d)1 above;

3. For each control technology which is technologically feasible to install and operate, an estimate of the cost of installation and operation;

4. An estimate of the remaining useful life of each source operation or item of equipment listed in (b)3i above or (c)1 above, as applicable;

5. An estimate of the reduction in NO_x emissions attainable through the use of each control technology which is technologically feasible to install and operate;

6. For each source operation or item of equipment listed in (b)3i above or (c)1 above, as applicable, the NO_x control technology or technologies which the owner or operator proposes to employ and an implementation schedule;

7. For each source operation or item of equipment listed in (b)3i above or (c)1 above, as applicable, a proposed NO_x emission limit;

8. Any other information which the Department requests which is reasonably necessary to enable it to determine whether the application satisfies the requirements of (g) below; and

9. A certification signed by the owner or operator, satisfying the requirements of N.J.A.C. 7:27-1.39.

(e) Within 30 days after receiving a proposed NO_x control plan or request for an alternative emission limit, the Department shall notify the owner or operator in writing whether the submission includes all of the information required under (d) above and under (b) or (c) above, as applicable. If the proposed NO_x control plan or request for an alternative emission limit is incomplete, the following shall apply:

1. The Department shall include in the notice a list of the deficiencies, a statement of the additional information required to make the proposed plan or request complete, and a time by which the owner or operator must submit a complete proposed plan or request;

2. The Department may refrain from reviewing the substance of the proposed plan or request (or any part thereof) until it is complete;

3. The owner or operator shall submit a complete proposed plan or request within the time stated in the Department's notification;

4. If the owner or operator fails to submit a complete proposed plan within the time stated in the Department's notification, the failure is a violation of this subchapter; and

5. If the owner or operator fails to submit a complete request for an alternative emission limit within the time stated in the Department's notification, the Department may deny the request.

(f) The Department shall seek comments from the general public before making any final decision to approve or disapprove a proposed NO_x control plan or request for an alternative emission limit. The Department shall publish notice of opportunity for public comment in a newspaper of general circulation in the area in which the major NO_x facility is located.

(g) Within six months after receiving a complete proposed NO_x control plan or request for an alternative emission limit, the Department shall approve, approve and modify, or disapprove the proposed plan or request and notify the owner or operator of the decision in writing. The Department shall approve the proposed plan or request only if it satisfies the following requirements:

1. The proposed plan or request contains all of the information required under (d) above and under (b) or (c) above, as applicable;

2. The proposed plan or request considers all control technologies available for the control of NO_x emissions from the type of equipment or source operation in question;

3. For any control technologies described in (g)2 above which the owner or operator does not propose to use on the equipment or source operation, the proposed plan or request demonstrates that the control technology:

i. Would be ineffective in controlling NO_x emissions from the equipment or source operation;

ii. Is unsuitable for use in the equipment or source operation, or duplicative of control technology which the plan proposes to use;

iii. Would carry costs disproportionate to the improvement in the reduction of the NO_x emissions limit which the control technology is likely to achieve, or disproportionately large in comparison to the total reduction in NO_x emissions which the control technology is likely to achieve over its useful life; or

iv. Would carry costs disproportionate to the costs incurred for the control of NO_x emissions from the same type of equipment or source operations used by other persons in the owner or operator's industry;

4. The emission limit proposed for each source operation and item of equipment is the lowest limit, which can practicably be achieved at a cost within the limits described in (g)3iii and iv above;

5. The cost of achieving an additional emission reduction beyond each proposed emission limit would be disproportionate to the size and environmental impact of that additional emission reduction; and

6. Any significant net emission of any criteria pollutant (as determined pursuant to N.J.A.C. 7:27-19.17 or 19.18, as applicable) do not cause or significantly contribute to a violation of a National Ambient Air Quality Standard, an exceedance of a Federal Prevention of Significant Deterioration increment if applicable, or any violation of the Clean Air Act, 42 U.S.C. 7401 et seq. A significant net emission increase of any criteria pollutant, and the determination of when such an increase causes or significantly contributes to an exceedance of a National Ambient Air Quality Standard, shall be determined pursuant to N.J.A.C. 7:27-18.

(h) Any alternate emission limit pursuant to (c) above or NO_x control plan pursuant to (b) above approved by the Department will be submitted to EPA for approval as a revision to the State Implementation Plan (SIP) for ozone.

(*i*) As a condition of an approval issued under this section, the Department may impose requirements upon the operation of any of the equipment or source operations at the subject facility listed pursuant to (b)3i or (c)1 above necessary to minimize any adverse impact upon human health, welfare and the environment.

(j) Before altering any equipment or source operation which is included in an approved facility-specific NO_x control plan, the owner or operator shall:

1. If the alteration would change any of the information required in (b) or (d) above, apply for and obtain pursuant to the procedures set forth at (b) and at (d) through (j) above the Department's approval of an amended facility-specific NO_x control plan, reflecting the proposed alteration. If the owner or operator does not obtain the Department's approval before commencing operation of the altered equipment or source operation, the Department may (in addition to assessing penalties under N.J.A.C. 7:27A-3.10) modify the facility-specific NO_x control plan to reflect the alteration, in a manner satisfying the criteria set forth in (g) above; and

2. Apply for and obtain such permits and certificates, or changes thereto, as are required under N.J.A.C. 7:27-8 or 22, N.J.A.C. 7:1K-1.5, and any other applicable law or regulation.

(k) An approval of an alternative emission limit is void upon the alteration of equipment or source operation which is subject to the rate unless:

1. The Department approves continued application of the existing alternative emission limit if the proposed alteration does not materially affect the basis of the Department's original approval; or

2. The owner or operator, before altering any equipment or source operation which is subject to an alternative emission limit, applies for and obtains the Department's approval of:

   i. A revised alternative emission limit pursuant to this section, reflecting the proposed alteration; and

   ii. Such permits and certificates as are required under N.J.A.C. 7:27-8 or 22, N.J.A.C. 7:1K-1.5, and any other applicable law or regulation.

(*l*) The Department will revoke an approval of a NO_x control plan by written notice to the holder of the approval if EPA denies approval of the proposed NO_x plan as a revision to the State Implementation Plan. The Department may revoke an approval of a NO_x control plan by written notice to the holder of the approval, if:

1. Any material condition of the approval is violated;

2. The Department determines that its decision to grant the approval was materially affected by a misstatement or omission of fact in the proposed plan or any supporting documentation;

3. The Department determines that continued use of the subject equipment or source operation pursuant to the approval poses a potential threat to the public health, welfare or the environment.

(m) A person may request an adjudicatory hearing in accordance with the procedure at N.J.A.C. 7:27-1.32, if:

1. The Department denied the person's application for approval of a plan or alternative limit under this section;

2. The person seeks to contest one or more conditions of the Department's approval imposed under (i) above; or

3. The Department has revoked the person's approval pursuant to (*l*)1, 2 or 3 above.

(n) The owner or operator of a facility described in (a)1 above shall implement the NO_x control plan (including, without limitation, complying with the emission limit set forth in the plan) approved by the Department by May 31, 1995, or by March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e), and maintain compliance with the plan and all conditions of the Department's approval thereafter. The owner or operator of a source operation or item of equipment for which the Department has approved an alternative emission limit shall cause it to emit NO_x at a rate no greater than the approved alternative emission limit.

(*o*) The owner or operator submitting a proposed NO_x control plan or request for an alternative emission limit shall send it to the Department at the following address:

Department of Environmental Protection
Division of Air Quality
Air Quality Permitting Program
Bureau of Air Permits
401 East State Street
Mail Code 401-02
PO Box 420
Trenton, New Jersey 08625-0420

(p) A major NO_x facility satisfies the requirements of this section if its only equipment or source operations with the potential to emit 10 tons or more of NO_x per year are thermal oxidizers. The owner or operator of such a facility is not required to submit a facility-specific NO_x control plan for the facility.

7:27-19.14 Procedures for obtaining approvals under this subchapter

(a) This section establishes the procedure for obtaining any of the following from the Department:

1. An exemption from this subchapter, pursuant to N.J.A.C. 7:27-19.2(f);

2. Approval of a fuel switching plan under N.J.A.C. 7:27-19.20, and authorization to operate under the plan;

3. Approval of a plan for phased compliance under N.J.A.C. 7:27-19.21, 19.22 or 19.23, and authorization to operate under the plan;

4. Approval of compliance with the requirements of N.J.A.C. 7:27-19.5(c) for a stationary combustion turbine;

5. Approval of an emissions averaging plan under N.J.A.C. 7:27-19.6, and authorization to operate under the plan; or

6. Approval of an alternative monitoring plan pursuant to N.J.A.C. 7:27-19.18(b).

(b) The person seeking an approval listed in (a) above shall submit a written application to the Department at the following address:

Department of Environmental Protection
Division of Air Quality
Air Quality Permitting Program
Bureau of Air Permits

401 East State Street
Mail Code 401-02
PO Box 420
Trenton, NJ 08625-0420

(c) The person seeking the approval under (a) above shall include the following information in the application submitted under (b) above:

1. Any information required under N.J.A.C. 7:27-19.2(f), 19.5(c), 19.6(b), 19.18(c), 19.20 or 19.21, as applicable;

2. The name, address and telephone number of the owner and the operator of the equipment or source operation which is the subject of the application;

3. The street address of the facility at which the subject equipment or source operation is located;

4. The type of equipment or source operation which is the subject of the application, and its make, model and serial number;

5. For requests submitted under N.J.A.C. 7:27-19.5(c), a proposed maximum allowable emission rate for the subject stationary combustion turbine;

6. A certification of the application, satisfying the requirements of N.J.A.C. 7:27-1.39; and

7. Any other information which the Department requests which is reasonably necessary to enable it to determine whether the application satisfies the requirements of (e) below.

(d) Within 30 days after receiving an application, the Department shall notify the applicant in writing whether the application includes all of the information required under (c) above. If the application is incomplete:

1. The Department shall include in the notice a list of the deficiencies, a statement of the additional information required to make the application complete, and the time by which the applicant must submit a complete application;

2. The Department may refrain from reviewing the substance of the application (or any part thereof) until it is complete;

3. The applicant shall submit a complete application within the time stated in the Department's notification; and

4. The Department may reject the application if the applicant fails to submit a complete application within the time stated in the Department's notification.

(e) Within six months after receiving a complete application, the Department shall grant its approval under this section only if:

1. The applicant satisfies all eligibility requirements set forth in N.J.A.C. 7:27-19.5(c), 19.6(c), 19.20, or 19.21 as applicable; and

2. Any significant net emission of any criteria pollutant (as determined pursuant to N.J.A.C. 7:27-19.17 or 19.18, as applicable) do not cause or significantly contribute to a violation of a National Ambient Air Quality Standard as determined pursuant to N.J.A.C. 7:27-18, an exceedance of a Federal Prevention of Significant Deterioration increment if applicable, or any violation of the Clean Air Act, 42 U.S.C. 7401 et seq. A significant net emission increase of any criteria pollutant, and the determination of when such an increase causes or significantly contributes to an exceedance of a National Ambient Air Quality Standard, shall be determined pursuant to N.J.A.C. 7:27-18.

(f) As a condition of an approval issued under this section (other than an approval of an exemption pursuant to N.J.A.C. 7:27-19.2(f)), the Department may impose requirements upon the operation of the subject equipment or source operation necessary to minimize any adverse impact upon human health, welfare and the environment.

(g) An approval issued under this section is void upon the alteration of equipment or source operation which is the subject of the approval unless:

1. The owner or operator applies for and obtains the Department's approval of a revised approval pursuant to this section, reflecting the proposed alteration; and

2. Before altering the equipment or source operation subject to the approval, the owner or operator applies for and obtains such permits and certificates as are required under N.J.A.C. 7:27-8 or 22, N.J.A.C. 7:1K-1.5, and any other applicable law or regulation.

(h) The Department may revoke an approval issued under this section, by written notice to the holder of the approval, if:

1. Any material condition of the approval is violated;

2. The Department determines that its decision to grant the approval was materially affected by a misstatement or omission of fact in the request for the approval or any supporting documentation;

3. The Department determines that as a result of a change in circumstances since the date of the approval, the subject equipment or source operations are able to comply with the applicable section of this subchapter. In revoking an approval pursuant to this paragraph, the Department shall specify an effective date for the

revocation which provides the owner or operator with a reasonable amount of time to comply with the applicable section of this subchapter; or

4. The Department determines that continued use of the subject equipment or source operation pursuant to the approval poses a potential threat to public health, welfare or the environment.

(i) A person may request an adjudicatory hearing in accordance with the procedure at N.J.A.C. 7:27-1.32, if:

1. The Department has denied the person's application for an approval under this section;

2. The person seeks to contest conditions of the approval imposed under (f) above; or

3. The Department has revoked the person's approval pursuant to (h) above.

(j) If an item of equipment or a source operation has exceeded the maximum allowable emission rate applicable under this subchapter without an approval pursuant to this section, it shall not be a defense to an enforcement action that an application for an approval is pending.

7:27-19.15 Procedures and deadlines for demonstrating compliance

(a) Except as set forth in (d) and (e) below, the owner or operator of equipment or a source operation subject to an emission limit under this subchapter shall demonstrate compliance with the emission limit as follows:

1. If a continuous emissions monitoring system has been installed on the equipment or source operation, or if any other provision of this subchapter requires emissions from the equipment or source operation to be monitored by a continuous emissions monitoring system under N.J.A.C. 7:27-19.18, the owner or operator shall calculate the average NO_x emission rate using the data from such a system for the NO_x concentration in the flue gas and either the flue gas flow rate or the fuel flow rate. To calculate the emission rate using the NO_x concentration and fuel flow rate, the owner or operator shall use the conversion procedure set forth in the Acid Rain regulations at 40 CFR 75, Appendix F, or an alternative procedure that the Department determines will yield the same result. Compliance with the limit shall be based upon the average of emissions:

i. Between May 1 and September 30, over each calendar day; and

ii. From October 1 through April 30 of the following year, over the 30-day period ending on each such day; or

2. If no continuous emissions monitoring system has been or is required to be installed on the equipment or source operation, compliance with the limit shall be based upon the average of three one-hour tests, each performed over a consecutive 60-minute period specified by the Department, and performed in compliance with N.J.A.C. 7:27-19.17. Any NO_x testing conducted pursuant to this section shall be conducted concurrently with CO testing. The applicable NO_x emission limits in this subchapter will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.8, 16.9, 16.10, 16.11, or the permit limit for CO, whichever is more stringent, is also met.

(b) Except as set forth in (d) and (e) below, for any equipment or source operation subject to this subchapter that was in operation before January 1, 1995, the owner or operator shall demonstrate compliance with this subchapter in accordance with (a)1 or 2 above by May 31, 1996, and thereafter at the frequency set forth in the permit for such equipment or source operation, except that the owner or operator of any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e), and that is in operation before November 7, 2005 shall demonstrate compliance with this subchapter in accordance with (a)1 or 2 above by March 7, 2008. Test results that demonstrate compliance with a new requirement within the five years preceding November 7, 2005 shall be accepted by the Department as satisfying this test requirement, if the testing and test report were reviewed by the Department and found satisfactory.

(c) Except as set forth in (d) and (e) below, for any equipment or source operation subject to this subchapter which commences operations or is altered after January 1, 1995, the owner or operator shall demonstrate compliance with this subchapter in accordance with (a)1 or 2 above within 180 days from the date on which the source commences operation, and thereafter at the frequency set forth in the permit for such equipment or source operation.

(d) For any equipment or source operation at an asphalt pavement production plant subject to a NO_x emissions limit at N.J.A.C. 7:27-19.9(a), the owner or operator shall demonstrate compliance with this subchapter in accordance with (a)2 above, within 365 days from the date at N.J.A.C. 7:27-19.9(f)1 or 2, and thereafter at the frequency set forth in the permit for such equipment or source operation.

(e) The owner or operator of any glass manufacturing furnace identified at N.J.A.C. 7:27-19.2(b)6 through 9 shall demonstrate compliance with the emission limit at N.J.A.C. 7:27-19.10(a), (b) or (f)2, as applicable, as follows:

1. Within 180 days after the first date after May 19, 2009 on which rebricking of the furnace is completed, and thereafter at the frequency set forth in the permit for such glass manufacturing furnace, the owner or operator shall demonstrate compliance in accordance with (e)2 or 3 below, whichever is applicable.

2. If a continuous emissions monitoring system has not been installed on the glass manufacturing furnace the owner or operator shall:

   i. Determine the average pounds of NO_x emitted per hour by averaging three one-hour tests in accordance with (a)2 above;

   ii. Determine the average tons of glass removed per hour during the same time period as the three one-hour tests in (e)2i above;

   iii. Divide the average pounds of NO_x emitted per hour determined in (e)2i by the average tons of glass removed per hour determined in (e)2ii. The quotient is pounds of NO_x emitted per of ton glass removed;

   iv. Compare the quotient to the emission limit specified at N.J.A.C. 7:27-19.10(a), (b) or (f)2, as applicable; and

   v. Comply with the CO testing requirements at (a)2 above.

3. If a continuous emissions monitoring system has been installed on the glass manufacturing furnace, on a daily basis the owner or operator shall:

   i. Determine the average pounds of NO_x emitted per day in accordance with (a)1i or ii above, as applicable;

   ii. Determine the tons of glass removed per day during the same day as in (e)3i above;

   iii. Divide the average pounds of NO_x emitted per day determined in (e)3i by the tons of glass removed per day determined in (e)3ii. The quotient is pounds of NO_x emitted per ton of glass removed; and

   iv. Compare the quotient to the emission limit at N.J.A.C. 7:27-19.10(a), (b) or (f)2, as applicable.

(f) An exceedance of any applicable NO_x emission limit set forth in this subchapter, determined through testing or monitoring performed pursuant to (a) through (e) above or otherwise, is a violation of this subchapter.

7:27-19.16 Adjusting combustion processes

(a) When any provision of this subchapter requires the adjustment of a combustion process for any equipment or source operation, other than stationary combustion turbines and reciprocating engines, the owner or operator of the equipment or source operation shall:

1. Inspect the burner, and clean or replace any components of the burner as necessary;

2. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern consistent with the manufacturer's specifications;

3. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly;

4. Minimize total emissions of NO_x and CO consistent with the manufacturer's specifications;

5. Measure the concentrations in the effluent stream of NO_x and CO in ppmvd, and O_2 in percent, before and after the adjustment is made; and

6. Convert the emission values of the NO_x and CO concentrations measured pursuant to (a)5 above to pounds per million BTU (lb/MM BTU) according to the following formula:

$$\text{lb/MM BTU} = \text{ppmvd} \times \text{MW} \times \text{F dry factor} \times O_2 \text{ correction factor} \div 387{,}000{,}000$$

Where:

ppmvd is the concentration in parts per million by volume, dry basis, of NO_x or CO

MW is the Molecular Weight for:

NO_x = 46 lb/lb-mole

CO = 28 lb/lb-mole

F dry factor for:

Natural gas = 8,710 dscf/MM BTU

Residual or fuel oil = 9,190 dscf/MM BTU

O_2 correction factor: (20.9%) ÷ (20.9% - O_2 measured)

O_2 measured is percent oxygen on a dry basis

(b) The owner or operator of the equipment or source operation adjusted pursuant to (a) above shall ensure that each adjustment is recorded in a log book or computer data system and retained for a minimum of five years, to be made readily accessible to the Department upon request. Such record shall contain the following information for each adjustment:

1. The date of the adjustment and the times at which it began and ended;

2. The name, title and affiliation of the person who made the adjustment;

3. The NO_x and CO concentrations in the effluent stream, in ppmvd, before and after each actual adjustment was made;

4. The concentration of O_2 (in percent dry basis) at which the CO and NO_x concentrations were measured pursuant to (a)5 above;

5. A description of any corrective action taken;

6. Results from any subsequent tests performed after taking any corrective action, including concentrations and converted emission values in pounds per million BTU (lb/MM BTU);

7. The type and amount of fuel used over the 12 months prior to the annual adjustment; and

8. Any other information which the Department or the EPA has required as a condition of approval of any permit or certificate issued for the equipment or source operation.

(c) The owner or operator shall ensure that an annual adjustment combustion process report is submitted electronically to the Department according to the schedule listed in (d) below, and in the format the Department specifies at its website. The report shall contain the following information:

1. The concentrations of NO_x and CO in the effluent stream in ppmvd, and O_2 in percent dry basis, measured before and after the adjustment of the combustion process pursuant to (a)5 above;

2. The converted emission values in lb/MM BTU for the measurements taken before and after the adjustment of the combustion process;

3. A description of any corrective actions taken as a part of the combustion adjustment; and

4. The type and amount of fuel used over the 12 months prior to the annual adjustment.

(d) The owner or operator of an industrial/commercial/institutional boiler or other indirect heat exchanger shall ensure that the annual adjustment combustion process report required in (c) above is submitted to the Department within 45 days after the adjustment of the combustion process is completed, based on the gross heat input of the boiler or heat exchanger as follows:

1. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least five million but less than 10 million BTU per hour, beginning in 2012;

2. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input rate of at least 10 million but less than 20 million BTU per hour, beginning in 2010;

3. For an industrial/commercial/institutional boiler or other indirect heat exchanger with a maximum gross heat input of rate at least 20 million BTU per hour or greater, beginning in 2009;

(e) The owner or operator of the adjusted equipment or source operation shall ensure that the operating parameter settings are established and recorded after the combustion process is adjusted and that the adjusted equipment or source operation is maintained to operate consistent with the annual adjustment.

(f) An exceedance of an emission limit that occurs during an adjustment of the combustion process under (a) above or (g) below is not a violation of this subchapter if it occurs as a result of the adjustment. After the combustion adjustment has been completed, the maximum emission rate of any contaminant shall not exceed the maximum allowable emission rate applicable under this subchapter or under an operating permit issued pursuant to N.J.A.C. 7:27-22 or an applicable certificate issued pursuant to N.J.A.C. 7:27-8.

(g) The owner or operator of a stationary combustion turbine or reciprocating engine shall ensure that the adjustment of the combustion process is carried out according to the manufacturer's recommended procedures and maintenance schedules.

(h) The owner or operator of a stationary combustion turbine or reciprocating engine adjusted pursuant to (g) above shall ensure that each adjustment is recorded in a log book or computer data system and retained for a minimum of five years, to be made readily accessible to the Department upon request. Such record shall contain the following information for each adjustment:

1. The date of the adjustment and the times at which it began and ended;

2. The name, title, and affiliation of the person who performed the procedure and adjustment;

3. The type of procedure and maintenance performed;

4. The concentrations of NO_x CO and O_2, measured before and after the adjustment was made; and

5. The type and amount of fuel use over the 12 months prior to the adjustment.

7:27-19.17 Source emissions testing

(a) Upon request by the Department or EPA, the owner or operator of any equipment or source operation subject to this subchapter shall:

1. Conduct tests to determine the emissions from such equipment or source operation to determine the nature and quantity of VOC, NO_x, or CO being emitted into the outdoor atmosphere;

2. Provide information concerning the location, rate, duration, concentration, and properties of the emissions of NO_x, CO or VOC from such equipment or source operations, and such other information as may be reasonably necessary to assess air emissions;

3. Provide information concerning the rate at which the equipment or source operation is combusting fuel during tests conducted under (a)1 above, and the maximum gross heat input value of the equipment or source operation; and

4. Provide the log prepared under (e) below, or any part thereof requested by EPA or the Department.

(b) Upon the Department's request, the owner or operator of any equipment or source operation subject to this subchapter shall provide the Department with temporary or permanent sampling facilities satisfying the requirements of N.J.A.C. 7:27B-1.4. The owner or operator shall construct such facilities in accordance with all applicable laws, ordinances and regulations, including those which regulate construction practices.

(c) During any testing conducted pursuant to this section, the equipment or source operation, and all components connected, attached to, or serving the equipment, shall be used and operated under normal routine operating conditions, under maximum capacity operating conditions, or under such other conditions within the capacity of the equipment as the Department or EPA requests.

(d) A person conducting testing pursuant to this section shall use the test method which the Department specifies, based upon the circumstances specific to the facility or to the equipment or source operation being tested. The Department shall specify one of the following methods:

1. The methods set forth at 40 CFR 60, Appendix A, method 7E; or

2. Any other method which EPA and the Department have approved in advance in writing. If EPA approves a method, and the Department determines that the method yields results at least as consistent as the appropriate method listed under (d)1 above, and which has no greater tendency to understate emissions, the Department shall approve the method.

(e) The owner or operator of the tested equipment or source operation shall record any test data collected under this section, and maintain it for at least five years after the date on which the testing was conducted.

7:27-19.18 Continuous emissions monitoring

(a) Any person required to install a continuous emissions monitoring system under this subchapter shall:

1. Obtain a system approved in advance by the Department. The Department shall approve a system if its design and specifications satisfy the requirements established by EPA at 40 CFR Part 60, Appendix B, Performance Specification Tests No. 2, and 40 CFR Part 60, Appendix F, Quality Assurance Requirements;

2. Install the system in compliance with the EPA regulations listed in (a)1 above, and in compliance with the manufacturer's specifications;

3. Conduct performance tests of the system in accordance with the EPA regulations listed in (a)1 above, and obtain confirmation from the Department that the system satisfies the performance requirements of those regulations;

4. Install and operate the system in compliance with the manufacturer's specifications; and

5. Continuously monitor and record NO_x emissions from the equipment or source operation subject to the monitoring requirement.

(b) A person required under this subchapter to install continuous emissions monitoring systems on equipment or source operations of a given type at a facility may satisfy this requirement without installing a continuous emissions monitor on every unit of such equipment or source operations at the facility, by using an alternative monitoring methodology set forth in an alternative monitoring plan, approved in advance in writing by the Department, which is as reliable for demonstrating compliance for that unit as a continuous emissions monitoring system which satisfies the criteria in (a) above would be.

(c) A person seeking approval of an alternative monitoring plan pursuant to (b) above shall submit a written application to the Department. The applicant shall include in the application all of the information required under N.J.A.C. 7:27-19.14(c)2, 3, 4 and 6. The applicant shall include in the application for the alternative monitoring plan the following information for each item of equipment or source operation for which a continuous emissions monitor is required under this subchapter and to which the alternative monitoring plan would apply:

1. The make and model of each unit of equipment or source operation;

2. The facility at which the equipment or source operation is used;

3. A description of the conditions under which the equipment or source operation is used;

4. The results of all source emissions testing conducted within the five years preceding the application for each unit of equipment or source operation listed in (c)1 above;

5. A statement that the applicant proposes to install or not install a continuous emissions monitor which satisfies the criteria set forth in (a) above;

6. A demonstration that the monitoring methodology set forth in the alternative monitoring plan is as reliable for demonstrating compliance as a continuous emissions monitor which satisfies the criteria listed in (a)1 above; and

7. Any other information which the Department requests which is reasonably necessary to enable it to determine whether the application satisfies the requirements of (e) below.

(d) Within 30 days after receiving an application, the Department shall notify the applicant in writing whether the application includes all of the information required under (c) above. If the application is incomplete:

1. The Department shall include in the notice a list of the deficiencies, a statement of the additional information required to make the application complete, and the time by which the applicant must submit a complete application;

2. The Department may refrain from reviewing the substance of the application (or any part thereof) until it is complete;

3. The applicant shall submit a complete proposed plan or request within the time stated in the Department's notification; and

4. The Department may reject the application if the applicant fails to submit a complete application within the time stated in the Department's notification.

(e) The Department shall approve an alternative monitoring plan only if:

1. The proposed alternative monitoring methodology is equivalent for purposes of reliably determining compliance to a continuous emissions monitor which satisfies the criteria listed in (a)1 above by the following:

i. For each item of equipment or source operation on which a continuous emissions monitoring system is not to be installed, the owner or operator identifies another item of equipment or source operation at the facility which is:

(A) Of the same make and model;

(B) Is used under substantially the same conditions;

(C) Will have a continuous emissions monitoring system installed on it; and

(D) Has an emissions rate which will not differ significantly from the emission rate from the corresponding equipment or source operation on which the continuous emissions monitoring system is to be installed; or

ii. For each item of equipment or source operation which a continuous emissions monitor is not to be installed, the owner or operator proposes a monitoring protocol for that equipment or source operation that provides quality-assured, representative monitoring data that can be used to determine continuous compliance consistent with EPA's proposed Enhanced Monitoring guidance, 40 CFR 64 (Federal Register Vol. 58, No. 203, p. 54648-54699). The proposed monitoring protocol should take into consideration site specific factors such as:

(A) Control system design;

(B) Operating processes at the facility;

(C) Demonstrated margin of compliance;

(D) The potential variability of emissions; and

(E) Established monitoring procedures utilized at the facility to meet other regulatory requirements; and

2. Under the plan, a continuous emissions monitoring system will be installed on each boiler serving an electric generating unit at the facility if required under 40 CFR 75 or 76.

(f) As a condition of an approval issued under this section, the Department may impose requirements upon the operation of any equipment or source operation subject to a monitoring plan necessary to minimize any adverse impact upon human health, welfare and the environment.

(g) The approval of a plan under this section is void upon the alteration of any item of equipment or source operation included in the plan (whether or not the item of equipment or source operation has a continuous emissions monitoring system installed) unless:

1. The owner or operator applies for and obtains the Department's approval of a revised plan pursuant to this section, reflecting the proposed alteration; and

2. Before altering the equipment or source operation subject to the plan, the owner or operator applies for and obtains such permits and certificates as are required under N.J.A.C. 7:27-8 or 22, N.J.A.C. 7:1K-1.5, and any other applicable law or regulation.

(h) The owner or operator shall comply with the approved plan, and with all conditions imposed by the Department under (f) above.

(*i*) The Department may revoke an approval issued under this section, by written notice to the owner or operator of the facility which is the subject of the plan, if:

1. Any material condition of the Department's approval of the plan is violated;

2. The Department determines that its decision to grant the approval was materially affected by a misstatement or omission of fact in the request for the approval or any supporting documentation; or

3. The Department determines that the alternative monitoring methodology is not equivalent to a continuous emissions monitor which satisfies the criteria of (a)1 above.

(j) In revoking an approval pursuant to (i) above, the Department shall specify an effective date for the revocation which provides the owner or operator with a reasonable amount of time to install a continuous emissions monitor on the item of equipment or source operation in question.

(k) A person may request an adjudicatory hearing in accordance with the procedure at N.J.A.C. 7:27-1.32, if:

1. The Department has denied the person's application for approval of a plan under this section;

2. The person seeks to contest conditions imposed by the Department under (f) above; or

3. The Department has revoked its approval of the person's plan pursuant to (i) and (j) above.

(*l*) The owner or operator of an item of equipment or source operation required to have a continuous monitoring system shall not operate the equipment or source operation without such a system, except in accordance with a plan approved under this section. If an item of equipment or a source operation required to have a continuous emissions monitoring system is operating without such a system, without first having received approval of a plan authorizing such operation, it shall not be a defense to an enforcement action that an application for approval of a plan is pending.

(m) A person seeking approval of an alternative monitoring plan shall send the application to the Department at the following address:

Department of Environmental Protection
Division of Air Quality
Air Quality Permitting Program
Bureau of Technical Services
Emission Measurement Section
Mail Code 380-01A
PO Box 420
Trenton, New Jersey 08625-0420

7:27-19.19 Recordkeeping and recording

(a) Any person required to record or maintain information or records pursuant to this subchapter shall maintain the required information or records for a period of no less than five years after the record was made. Such person shall make the records available to the Department or to EPA upon request.

(b) Any person required to record or maintain information or records pursuant to this subchapter may submit a request to the Department, in writing, for approval to maintain alternate records. The Department may approve the request if the person demonstrates to the satisfaction of the Department that the alternate records or information are at least as effective as those required by this subchapter in documenting compliance with this subchapter.

(c) The recordkeeping requirements in (d) and (f) below apply to the owner or operator of any combustion source that is:

1. Included in a fuel switching plan approved under N.J.A.C. 7:27-19.14 and 19.20; or

2. Included in a plan for phased compliance approved under N.J.A.C. 7:27-19.14 and N.J.A.C. 7:27-19.21 or 19.23

(d) For each combustion source listed in (c) above, the owner or operator shall record the following information for each day from May 1 through September 30, for the 30-day period ending on October 1, and for each 30-day period ending on each subsequent day through April 30 of the following year:

1. Information sufficient to identify the combustion source, including a brief description (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, the company stack designation, and any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the owner or operator;

2. The day or 30-day period, as applicable, for which the record is being made;

3. The amount, type and higher heating value of each fuel consumed during each day from May 1 through September 30, during the 30-day period ending on October 1, and during each 30-day period ending on each subsequent day through April 30 of the following year;

4. The quantity of NO_x emitted during the day or 30-day period, as applicable, determined in accordance with N.J.A.C. 7:27-19.15(a) and expressed in pounds or tons;

5. The allowable quantity of NO_x emissions as expressed in pounds or tons for the day or 30-day period as determined according to N.J.A.C. 7:27-19.20, 19.21 or 19.23; and

6. Any other information required to be maintained as a condition of an approval granted under N.J.A.C. 7:27-19.14 and N.J.A.C. 7:27-19.20, 19.21 or 19.23.

(e) The owner or operator of any combustion source that is temporarily combusting fuel oil or other liquid fuel in place of natural gas pursuant to N.J.A.C. 7:27-19.25 shall keep on site a record of the number of hours such fuel has been combusted.

(f) The owner or operator of a combustion source listed in (c) or (e) above shall keep the records required under (d) and (e) above at the facility in a permanently bound log book or by an electronic method that is easily accessible on site and at the time of inspection, in a format that enables the Department to readily determine whether the combustion source is in compliance.

(g) The reporting requirements below apply to the owner or operator of any combustion source that is listed in (c) or (e) above as follows:

1. If a continuous emissions monitoring system has been installed on the equipment or source operation, an owner or operator shall submit to the Department a quarterly report in accordance with the requirement to report excess emissions contained in the Preconstruction Permit and Operating Certificate or an Operating Permit for the equipment or source operation. For an owner or operators subject to (c) above, the information pursuant to (d) above shall be submitted with the report for each day or 30-day period of a violation. If no violations occurred during the quarter, the owner or operator should provide certification that no violations occurred and that the records are maintained at the facility. Certification of the notification should be in accordance with N.J.A.C. 7:27-1.39; or

2. If no such continuous emissions monitoring system has been installed the owner or operator shall submit to the Department on March 1 of each year an annual report for the preceding calendar year. Such annual report shall include any violations which occurred during the previous year. If no violations occurred

during the year, the owner or operator shall provide certification that no violations occurred and that the records are maintained at the facility. Certification of the notification shall be in accordance with N.J.A.C. 7:27-1.39.

7:27-19.20 Fuel switching

(a) The owner or operator of a combustion source included in a plan for fuel switching is authorized to comply with the plan if the Department approves the plan pursuant to this section and N.J.A.C. 7:27-19.14. The owner or operator's compliance with the plan is in lieu of causing the combustion source to comply with the emission limit under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10 that would otherwise apply to the combustion source.

(b) A combustion source may be included in a fuel switching plan only if it will be deriving from a cleaner fuel a greater percentage of its total heat input than it derived in the base year.

(c) An owner or operator seeking approval of a plan for fuel switching shall submit an application to the Department by June 22, 1995, in accordance with N.J.A.C. 7:27-19.14(a), (b) and (c). In addition to the information required under N.J.A.C. 7:27-19.14(c), the owner or operator shall include in the application the following information regarding each combustion source that is to combust a cleaner fuel seasonally:

1. Information sufficient to identify the combustion source, including a brief description, (for example, "dry-bottom coal-fired boiler serving an electric generating unit" or "oil-fired simple-cycle combustion turbine"), its location, its permit number, its company stack designation, any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the applicant;

2. The maximum gross heat input rate of the combustion source, expressed in million BTUs per hour;

3. The type of fuel or fuels combusted in the combustion source;

4. The maximum allowable NO_x emission rate for the combustion source, determined under (d) below, together with the calculations made to determine that rate;

5. The method to be used to measure the actual NO_x emission rate of each combustion source;

6. A statement that the owner or operator will operate each combustion source included in the plan in accordance with the requirements of (g) below;

7. The name and business telephone number of the individual responsible for recordkeeping and reporting required under N.J.A.C. 7:27-19.19; and

8. Any other information that the Department requests, which is reasonably necessary to enable it to determine whether the source operations and items of equipment subject to fuel switching will comply with the requirements of this section.

(d) The maximum daily and annual NO_x emission rate for a combustion source included in the fuel switching plan is determined as follows (except that for a coal-fired, wet-bottom boiler serving an electric generating unit that uses the tangential or face firing method, only (d)1 through 3 apply):

1. Establish the base year. The base year is calendar year 1990, unless the Department approves the use of calendar year 1991, 1992 or 1993 as the base year. The Department shall approve the use of 1991, 1992 or 1993 as the base year only if the owner or operator demonstrates that the alternative year is more representative of the normal operation of the combustion source;

2. For each fuel that the combustion source combusted during the base year (established under (d)1 above), determine the heat input (in MMBTU) that the combustion source derived from the combustion of that fuel during the base year;

3. Determine the maximum allowable NO_x emissions rate (in lb/MMBTU) for the combustion of each fuel, under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10, as applicable;

4. For each fuel, multiply the heat input in the base year (determined under (d)2 above) by the maximum allowable emissions rate (determined under (d)3 above);

5. Add all of the amounts determined under (d)4 above;

6. Divide the total determined under (d)5 above by the sum of all of the heat inputs that the combustion source derived from the combustion of each fuel (determined under (d)2 above). The result is the maximum allowable NO_x emission rate, expressed in lb/MMBTU, provided, however, that the maximum allowable NO_x emission rate shall not be greater than the rate under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10 that would apply if the combustion source were combusting the primary fuel that it had used in the base year;

7. The calculations under (d)4, 5 and 6 above can be expressed in the following equation:

$$M = \frac{(HI_1 \, x \, L_1) + (HI_2 \, x \, L_2) + \cdots + (HI_N \, x \, L_N)}{(HI_1 + HI_2 + \cdots + HI_N)}$$

Where:

i. M is the maximum allowable NO_x emission rate, in lb/MMBTU;

ii. HI_1 is the heat input that the combustion source derived from the combustion of Fuel 1 during the base year, expressed in MMBTU;

iii. L_1 is the maximum allowable emissions rate (in lb/MMBTU) for the combustion of Fuel 1, under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10, as applicable;

iv. HI_2 is the heat input that the combustion source derived from the combustion of Fuel 2 during the base year, expressed in MMBTU;

v. L_2 is the maximum allowable emissions rate (in lb/MMBTU) for the combustion of Fuel 2, under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10, as applicable;

vi. N is number of fuels combusted during the base year;

vii. HI_N is the heat input that the combustion source derived from the combustion of Fuel N during the base year, expressed in MMBTU; and

viii. L_N is the maximum allowable emissions rate (in lb/MMBTU) for the combustion of Fuel N, under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10, as applicable.

(e) The Department shall approve a plan for fuel switching only if the application satisfies all requirements of (c) above and N.J.A.C. 7:27-19.14. A plan for fuel switching shall be deemed to meet these requirements if it provides for a combustion source to attain compliance with the emission limits under (g)3, 4 and 5 below partly through combustion of cleaner fuel and partly through the use of other NO_x control measures, and satisfies all other requirements of (c) above and N.J.A.C. 7:27-19.14.

(f) Any owner or operator seeking to comply with this subchapter by fuel switching in accordance with this section shall obtain the Department's written approval of the application pursuant to N.J.A.C. 7:27-19.14 before May 1, 1995, and maintain that approval in effect.

(g) Beginning in calendar year 1995, the owner or operator shall operate each combustion source included in the plan in compliance with the following:

1. All conditions of the Department's written approval of the fuel switching plan shall be met;

2. From May 1 through September 30 of each year, the combustion source shall combust the cleaner fuel exclusively, or derive a higher percentage of its total heat input from cleaner fuel than the percentage it derived from May 1 through September 30 of the base year;

3. During each calendar day from May 1 through September 30 of each year, the combustion source shall emit NO_x at an average rate no higher than the maximum allowable NO_x emission rate determined under (d) above; provided however, that a coal-fired, wet-bottom boiler serving an electric generating unit that uses the tangential or face firing method, the maximum allowable NO_x emission rate shall be 1.0 lb/MMBTU;

4. During the 30-day period ending on October 1 of each year, and each 30-day period ending on each subsequent day thereafter until April 30 of the following year, the combustion source shall emit NO_x at an average rate no higher than the rate under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10 that would apply if the combustion source were combusting the primary fuel that it had used in the base year; provided however, that a coal-fired, wet-bottom boiler serving an electric generating unit that uses the tangential or face firing method shall emit NO_x at a rate no higher than 1.5 lb/MMBTU; and

5. During each calendar year, the combustion source shall emit NO_x at an average rate no higher than the maximum NO_x emission rate determined under (d) above; provided however, that a coal-fired, wet-bottom boiler serving an electric generating unit that uses the tangential or face firing method shall emit NO_x at a rate no higher than 1.5 lb/MMBTU. Compliance with this requirement shall be determined based on averaging over each calendar year.

(h) The owner or operator shall determine the NO_x emissions from each combustion source included in an approved fuel switching plan in accordance with N.J.A.C. 7:27-19.15(a).

(*i*) The owner or operator shall demonstrate compliance with this section as follows:

1. Each calendar day from May 1 through September 30 of each year, the owner or operator shall determine whether each combustion source included in the plan is in compliance with the applicable daily NO_x emission limit under (g)3 above. The owner or operator shall perform the calculations necessary to verify compliance and make a record of them within three working days after the date that is the subject of the calculation;

2. For the 30-day period ending on October 1, and for each 30-day period ending on each subsequent day until April 30 of the following year, the owner and operator shall determine whether each combustion source included in the plan is in compliance with the applicable 30-day NO_x emission limit under (g)4 above; and

3. By January 15 of each year, the owner or operator shall determine whether the total actual NO_x emissions from each combustion source included in the plan (determined under (k) below) complied with the limit on annual NO_x emissions (determined under (j) below) during the preceding calendar year.

(j) The limit on annual NO_x emissions is calculated as follows:

1. For each fuel that the combustion source combusted during the year, determine the heat input (in MMBTU) that the combustion source derived from the combustion of that fuel during the year;

2. Add all of the amounts determined under (j)1 above;

3. Multiply the sum determined under (j)2 above by the maximum NO_x emissions rate determined under (d) above. The result is the limit on annual NO_x emissions, expressed in pounds;

4. The calculations under (j)2 and 3 above can be expressed in the following equation:

$$L = M \times (AHI_1 + AHI_2 + ... + AHI_N)$$

Where:

i. L is the limit on annual NO_x emissions, in pounds;

ii. M is the maximum allowable emissions rate determined under (d) above;

iii. AHI_1 is the heat input that the combustion source derived from the combustion of Fuel 1 during the year, expressed in MMBTU;

iv. AHI_2 is the heat input that the combustion source derived from the combustion of Fuel 2 during the year, expressed in MMBTU;

v. N is number of fuels combusted during the year; and

vi. AHI_N is the heat input that the combustion source derived from the combustion of Fuel N during the year, expressed in MMBTU.

(k) The actual annual NO_x emissions from the combustion source are calculated as follows:

1. Determine the heat input (expressed in MMBTU) that the combustion source actually derived from each fuel it combusted during the year;

2. Determine the average rate (in lb/MMBTU) at which the combustion source actually emitted NO_x when combusting each fuel listed in 1 above, in accordance with N.J.A.C. 7:27-19.15(a);

3. For each fuel combusted during the year, multiply the heat input (determined under (k)1 above) by the average rate of NO_x emissions (determined under (k)2 above);

4. Add all of the amounts determined under (k)3 above;

5. The calculations under (k)3 and 4 above can be expressed in the following equation:

$$AE = (AHI_1 \times AR_1) + (AHI_2 \times AR_2) + ... \% 8f (AHI_N \times AR_N)$$

Where:

i. AE is the actual NO_x emissions during the year from the combustion source, expressed in pounds;

ii. AHI_1 is the heat input that the combustion source actually derived from the combustion of Fuel 1 during the year, expressed in MMBTU;

iii. AR_1 is the average rate at which the combustion source actually emitted NO_x when combusting Fuel 1 during the year, expressed in lb/MMBTU;

iv. AHI_2 is the heat input that the combustion source actually derived from the combustion of Fuel 2 during the year, expressed in MMBTU;

v. AR_2 is the average rate at which the combustion source actually emitted NO_x when combusting Fuel 2 during the year, expressed in lb/MMBTU;

vi. N is number of fuels that the combustion source actually combusted;

vii. AHI_N is the heat input that the combustion source actually derived from the combustion of Fuel N during the year, expressed in MMBTU; and

viii. AR_N is the average rate at which the combustion source actually emitted NO_x when combusting Fuel N during the year, expressed in lb/MMBTU.

(*l*) For each combustion source included in the approved plan, the owner or operator shall comply with the recordkeeping and reporting requirements of N.J.A.C. 7:27-19.19.

7:27-19.21 Phased compliance - repowering

(a) The owner or operator of a combustion source included in a repowering plan is authorized to comply with the plan if the Department approves the plan pursuant to this section and N.J.A.C. 7:27-19.14. The owner or operator's compliance with the plan is in lieu of causing the combustion source to comply with emission limit under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10 that would otherwise apply to the combustion source.

(b) By June 22, 1995 (or by February 7, 2006 for any facility, equipment or source operation that is subject to a NO_x emission limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)) an owner or operator seeking approval of a repowering plan shall submit to the Department an application for approval of the repowering plan pursuant to N.J.A.C. 7:27-19.14, including a repowering plan pursuant to (c) below. If an owner or operator fails to submit the application by the applicable date, the Department may reject the application. The Department may elect to process a late application, based on how late the application is, the nature and extent of the owner or operator's efforts to submit the application on time, whether the owner or operator advised the Department before the application due date that a late application would be submitted, and the extent of the emission reductions promised in the late application. If the Department elects to process a late application, the pendency of the application shall not be a defense to a violation of a NO_x emission limit to which the source is subject in the absence of an approved plan.

(c) The owner or operator shall include the following information in the repowering plan with respect to each combustion source included in the plan:

1. Information sufficient to identify the combustion source, including a brief description (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, the company stack designation, and any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the owner or operator;

2. A proposed schedule setting dates by which the owner or operator will complete the following milestones for the combustion source:

   i. Submitting applications for all necessary permits and certificates if installing a new combustion source;

   ii. Obtaining all necessary permits and certificates if installing a new combustion source;

   iii. Awarding contracts to repower the source including contracts for the purchase of heat or power from a new combustion source or placing orders for the purchase of component parts and/or equipment necessary to repower the source;

iv. Initiating construction and/or installation of the replacement unit if installing a new combustion source; and

v. Completing the repowering.

3. Specific procedures and schedules for implementing interim measures for control of NO_x emissions for the combustion source during the interim period;

4. A list of all NO_x control technologies available for use with the combustion source;

5. An analysis of the technological feasibility of installing and operating each NO_x emission control technology identified in 4 above for the interim period;

6. For each control technology that is technologically feasible to install and operate, an estimate of the cost of installation and operation;

7. An estimate of the reduction in NO_x emissions attainable through the use of each control technology which is technologically feasible to install and operate. If a control technology installed before the combustion source is repowered cannot be used after repowering, the owner or operator may limit the estimate of emission reductions to those that will be attained during the interim period;

8. An analysis of the cost-effectiveness of each control technology, based on the costs of installation and operation under (c)6 above and the estimated emission reductions under (c)7 above;

9. The NO_x control measures that the owner or operator proposes to employ during the interim period;

10. The proposed interim NO_x emission limit with which the source will comply during the interim period;

11. The method to be used to measure the actual NO_x emission rate of the combustion source;

12. The name and business telephone number of the person responsible for recordkeeping and reporting under N.J.A.C. 7:27-19.19 and under (e)8 below;

13. The location of the proposed replacement unit; and

14. Any other information that the Department requests, which is reasonably necessary to enable it to determine whether the operation of combustion sources included in the repowering plan will comply with the requirements of this section.

(d) The Department shall approve a repowering plan only if the following requirements are satisfied:

1. The application satisfies all the requirements of N.J.A.C. 7:27-19.14 and (c) above, including without limitation the requirement that the proposed repowering plan consider all control technologies available for the control of NO_x emissions from each type of combustion source included in the plan during the interim period;

2. For each combustion source included in the plan, the replacement unit will incorporate advances in the art of air pollution control for the kind and amount of air contaminant emitted;

3. The repowering will improve the efficiency with which each combustion source included in the plan combusts fuel and/or generates power;

4. The completion date listed in (c)2v above is no later than May 1, 1999, except that any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e) shall specify a completion date that is no later than November 7, 2009;

5. For any control technologies described in (c)4 above that the owner or operator does not propose to use on the combustion source, the proposed plan demonstrates that the control technology:

   i. Would be ineffective in controlling NO_x emissions from the combustion source;

   ii. Is unsuitable for use with the combustion source, or duplicative of control technology which the plan proposes to use;

   iii. Would carry costs disproportionate to the improvement in the reduction of the NO_x emissions rate that the control technology is likely to achieve, or disproportionately large in comparison to the total reduction in NO_x emissions that the control technology is likely to achieve over its useful life; or

   iv. Would carry costs disproportionate to the costs incurred for the control of NO_x emissions from the same type of combustion sources used by other persons in the owner or operator's industry who are also subject to the NO_x RACT requirements of P.L. 101-549, § 182(f).

6. For each combustion source included in the plan, the interim emission limit proposed under (c)10 above is the lowest rate that can practicably be achieved at a cost within the limits described in (d)5iii and iv above;

7. For each combustion source included in the plan, the cost of achieving an additional emission reduction beyond the interim emission limit proposed under (c)10 above would be disproportionate to the size and environmental impact of that additional emission reduction; and

8. The owner or operator has entered into an agreement with the Department in accordance with the requirements of (h) below.

(e) An owner or operator who has obtained the Department's approval of a repowering plan shall:

1. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), operate all combustion sources included in the approved repowering plan in a manner that complies with the plan and with all conditions of the Department's approval;

2. Meet the compliance milestones in the approved plan;

3. Repower the combustion sources included in the plan by the date specified in the approved plan;

4. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), determine the actual NO_x emissions from each combustion source included in the repowering plan in accordance with N.J.A.C. 7:27-19.15(a);

5. If the approved plan provides for the owner or operator to annually adjust the combustion process for a combustion source included in the plan, do so in accordance with the general procedures set forth at N.J.A.C. 7:27-19.16 before May 1 of each calendar year beginning with 1995, until repowering is completed;

6. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)). comply with the recordkeeping and reporting requirements of N.J.A.C. 7:27-19.19;

7. Within 15 days after the date specified in the approved repowering plan for completion of a milestone listed in (c)2 above, notify the Department in writing that the milestone has or has not been completed. If the milestone has not been completed, the owner or operator shall include in the notice the reason for the delay and the expected date on which the milestone will be completed;

8. Incorporate advances in the art of air pollution control into each repowered source, as required in the preconstruction permit for the replacement equipment;

9. If the plan includes a boiler serving an electric generating unit, cause the repowered boiler serving an electric generating unit to emit NO_x at a rate no higher than the applicable maximum allowable NO_x listed in Table 12 below (provided however, that the NO_x emission limits in Table 12 shall not be construed to limit the owner or operator's obligations under (e)8 above); and

10. If repowering of any combustion source included in the plan is not completed by May 1, 1999 (or by November 7, 2009 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), cease operating the combustion source.

TABLE 12

Maximum Allowable NO_x Emission Rates for Boilers Serving Electric Generating Units Which Have Been Repowered

(pounds per million BTU)

	Firing Method		
Fuel/Boiler Type	**Tangential**	**Face**	**Cyclone**
Coal--Wet Bottom	0.2	0.2	0.2
Coal--Dry Bottom	0.2	0.2	N/A
Oil and/or Gas	0.1	0.1	0.1
Gas Only	0.1	0.1	0.1

(f) Except as provided in (g) below:

1. The Department shall seek comments from the general public before making any final decision to approve or disapprove a proposed repowering plan. The Department shall publish notice of opportunity for public comment in a newspaper of general circulation in the area in which each combustion source included in the plan is located;

2. The Department shall submit any repowering plan (and agreement to repower) approved under this section to EPA, as a proposed revision to New Jersey's State Implementation Plan; and

3. Upon EPA's approval of the revision to New Jersey's State Implementation Plan, it shall be Federally enforceable. Plans listed under (g) below shall be Federally enforceable upon the issuance of the Department's approval.

(g) A repowering plan (and agreement to repower) approved under this section is not required to be submitted to EPA as a proposed revision to New Jersey's State Implementation Plan, if the plan provides that NO_x emissions from each combustion source included in the plan will be controlled during the interim period through one of the following methods:

1. Fuel switching under N.J.A.C. 7:27-19.20, using natural gas as the "cleaner fuel"; or

2. The use of selective non-catalytic reduction from May 1 through September 30 of each year.

(h) Before the Department approves a repowering plan, the owner or operator shall enter into a Federally enforceable agreement containing the following provisions:

1. Information sufficient to identify the owner or operator;

2. Information sufficient to identify the combustion source, including a brief description (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, the company stack designation, and any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the owner or operator;

3. The owner or operator's undertaking of the following duties:

   i. Completing the milestones listed in (c)2 above by specified dates;

   ii. Ceasing to operate a combustion source if repowering is not completed by a date specified for that source;

   iii. Implementing interim measures to control NO_x emissions from each combustion source during the interim period;

   iv. Causing each combustion source to emit NO_x at a rate no greater than a specified interim NO_x emission limit applicable during the interim period;

   v. Using a specified method to measure the actual NO_x emission rate of the combustion source; and

   vi. Maintaining the Department's approval in effect;

4. A provision for delay of compliance caused by a "force majeure" event beyond the control of and without the fault of the owner or operator;

5. A provision under which the Department can terminate the agreement and its approval of the repowering plan if the owner or operator materially fails to

complete the repowering or any other milestone by the date specified in the approved plan. Termination of the agreement and the approval of the plan is in addition to any other remedies the Department has under this chapter and N.J.A.C. 7:27A; and

6. Other provisions necessary to make the agreement Federally enforceable, to accomplish the purposes of this subchapter, or to allow the agreement to be administered effectively.

7:27-19.22 Phased compliance - impracticability of full compliance by May 19, 2009

(a) Any owner or operator listed at N.J.A.C. 7:27-19.29(a) who has submitted a phased compliance plan to the Department is authorized to comply with the plan if the Department approves the plan pursuant to this section and N.J.A.C. 7:27-19.14. The owner or operator's compliance with the plan is in lieu of achieving by May 19, 2009 the NO_x emission reductions required by Equation 1 at N.J.A.C. 7:27-19.29(c).

(b) By June 9, 2009, an owner or operator seeking approval of a phased compliance plan shall submit to the Department an application for approval of the phased compliance plan pursuant to N.J.A.C. 7:27-19.14. If an owner or operator fails to submit the application by June 9, 2009, the Department may reject the application. The Department may elect to process a late application, based on how late the application is, the nature and extent of the owner or operator's efforts to submit the application on time, and whether the owner or operator advised the Department before the application due date that a late application would be submitted. If the Department elects to process a late application, the pendency of the application shall not be a defense to a violation of the requirement at N.J.A.C. 7:27-19.29(b)1 to achieve the NO_x emission reductions calculated pursuant to Equation 1 at N.J.A.C. 7:27-19.29(c) to which the owner or operator is subject in the absence of an approved plan. In the application, the owner or operator shall include the following information in addition to the information required under N.J.A.C. 7:27-19.14:

1. The phased compliance plan described in (c) below;

2. A description of the steps that the owner or operator has taken to obtain compliance with the NO_x emission reduction requirements at N.J.A.C. 7:27-19.29; and

3. For each measure included in the plan, a detailed explanation of the reasons why the owner or operator believes that implementation of the measure by May 19, 2009 is impracticable.

(c) The owner or operator shall include the following information in the phased compliance plan with respect to each measure included in the plan:

1. A description of the measure and how it is expected to reduce NO_x emissions;

2. For each measure that requires modification of a combustion source, such as installation of a control apparatus, a proposed schedule setting dates by which the owner or operator will complete the following milestones for the measure:

   i. Submit applications for all necessary permits and certificates;

   ii. Obtain all necessary permits and certificates;

   iii. Award contracts for the implementation of control measures or place orders for the purchase of component parts, equipment and/or control apparatus necessary to attain compliance with the applicable NO_x emission limit under this subchapter;

   iv. Initiate construction and/or installation of the component parts, equipment and/or control apparatus necessary to attain compliance with the applicable NO_x emission limit under this subchapter; and

   v. Attain full compliance with the NO_x emission reduction determined by Equation 1 at N.J.A.C. 7:27-19.29(c);

3. For each NO_x emission reduction measure that does not require modification of a combustion source, a proposed schedule setting dates by which the owner or operator shall complete all applicable milestones for implementing the measure; and

4. Any other information that the Department requests, which is reasonably necessary to enable it to determine whether each proposed NO_x emission reduction measure will achieve the NO_x emission reduction determined by Equation 1 at N.J.A.C. 7:27-19.29(c).

(d) The Department shall approve a phased compliance plan only if the following requirements are satisfied with respect to each NO_x emission reduction measure included in the plan:

1. The application satisfies all the requirements of N.J.A.C. 7:27-19.14 and (b) above;

2. The information submitted under (b)2 above establishes that the owner or operator has made a good faith effort to obtain compliance with the NO_x emission reduction determined by Equation 1 at N.J.A.C. 7:27-19.29(c) by implementing all available NO_x emission reduction measures that can be reasonably implemented prior to May 19, 2009;

3. The information submitted under (b)3 above, evaluated in light of the criteria set forth in (e) below, establishes that it is impracticable for the NO_x emission reduction measure to be implemented prior to May 19, 2009; and

4. The interim period is less than 12 months.

(e) In determining whether compliance with the emission reduction determined by Equation 1 at N.J.A.C. 7:27-19.29(c) by May 19, 2009 is impracticable, the Department shall apply the following criteria:

1. The amount of time needed to obtain all permits and certificates necessary to attain compliance, following the submission of an administratively complete application;

2. The amount of time needed to obtain all component parts and/or equipment necessary to obtain compliance, following the placement of orders for such parts and/or equipment. The estimate of time may reflect shortages in the supply of such parts and/or equipment;

3. The amount of time needed to complete construction and/or installation of the component parts and/or equipment necessary to attain compliance, following the initiation of construction and/or installation; and

4. The nature, extent and probability of any harm to public safety or welfare that could result from accelerating construction and/or installation in order to attain compliance by May 19, 2009. For example, if it were probable that the owner or operator of the electric generating utility could not attain compliance by that date without subjecting a substantial number of customers to voltage reductions and/or interruptions in electric service, that fact would be relevant in establishing impracticability.

(f) On the date that the approved phased compliance plan provides for the owner or operator to attain full compliance with the emission reduction determined by Equation 1 at N.J.A.C. 7:27-19.29(c), the Department's approval of the phased compliance plan shall expire. Upon expiration of the Department's approval, the owner or operator shall be subject to all applicable requirements of N.J.A.C. 7:27-19.29, including the NO_x emission reduction that would have been required in the absence of an approved plan.

(g) An owner or operator who has obtained the Department's approval of a phased compliance plan shall:

1. Operate all combustion sources affected by the plan in a manner that complies with the plan and with all conditions of the Department's approval;

2. Meet all milestones in the approved phased compliance plan;

3. Within 15 days after the date of each milestone in the approved phased compliance plan, advise the Department in writing whether the owner or operator has met the milestone; and

4. During the interim period, control NO_x emissions from all combustion sources as follows:

   i. By adjusting the combustion process in accordance with N.J.A.C. 7:27-19.16, if the source's air-to-fuel ratio can be adjusted in a manner that reduces NO_x emissions; or

   ii. By seasonally combusting natural gas in accordance with N.J.A.C. 7:27-19.20, or implementing other measures that the Department determines are appropriate in light of the costs involved and the total quantity of NO_x reductions that will be achieved until the full compliance date listed in (c)2v above.

7:27-19.23 Phased compliance - use of innovative control technology

(a) The owner or operator of a combustion source included in a phased compliance plan is authorized to comply with the plan if the Department approves the plan pursuant to this section and N.J.A.C. 7:27-19.14. The owner or operator's compliance with the plan is in lieu of causing the combustion source to comply with the emission limit under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10 that would otherwise apply to the combustion source.

(b) By June 22, 1995 (or by February 7, 2006 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), an owner or operator seeking approval of an innovative control technology plan shall submit to the Department an application pursuant to N.J.A.C. 7:27-19.14 and the plan itself pursuant to (c) below. If an owner or operator fails to submit the application by the applicable date, the Department may reject the application. The Department may elect to process a late application, based on how late the application is, the nature and extent of the owner or operator's efforts to submit the application on time, whether the owner or operator advised the Department before the application due date that a late application would be submitted, and the extent of the emission reductions promised in the late application. If the Department elects to process a late application, the pendency of the application shall not be a defense to a violation of a NO_x emission limit to which the source would be subject in the absence of an approved plan.

(c) The owner or operator shall include the following information in the innovative control technology plan with respect to each combustion source included in the plan:

1. Information sufficient to identify the combustion source, including a brief description (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, the company stack designation, and any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the owner or operator;

2. A description of the NO_x control measures that the owner or operator proposes to employ as innovative control technology;

3. The rate of NO_x emissions that the owner or operator expects that the source will attain in employing the proposed innovative control technology, and the basis for that expectation;

4. Information establishing that the proposed innovative control technology is technically sound and sufficiently developed to be implemented by May 1, 1999 (or by November 7, 2009 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e));

5. A proposed schedule setting dates by which the owner or operator will complete the following milestones for the combustion source:

   i. Submitting applications for all necessary permits and certificates;

   ii. Obtaining all necessary permits and certificates;

   iii. Awarding contracts for the implementation of the innovative control technology, or placing orders for the purchase of any component parts, equipment and/or control apparatus associated with the innovative control technology;

   iv. Awarding contracts and initiating implementation of the innovative control technology (including any construction and/or installation, if applicable); and

   v. Completing the implementation of the innovative control technology.

6. Specific procedures and schedules for implementing interim measures for control of NO_x emissions for the combustion source during the interim period;

7. A list of all NO_x control technologies available for interim use with the combustion source during the interim period;

8. An analysis of the technological feasibility of installing and operating each NO_x emission control technology identified in (c)7 above for the interim period;

9. For each control technology that is technologically feasible to install and operate, an estimate of the cost of installation and operation;

10. An estimate of the reduction in NO_x emissions attainable through the use of each control technology which is technologically feasible to install and operate. If a

control technology installed before the innovative control technology is implemented cannot be used after that time, the owner or operator may limit the estimate of emission reductions to those that will be attained during the interim period;

11. An analysis of the cost-effectiveness of each control technology, based on the costs of installation and operation under (c)9 above and the estimated emission reductions under (c)10 above;

12. The NO_x control measures that the owner or operator proposes to employ during the interim period;

13. The proposed interim NO_x emission limit with which the source will comply during the interim period;

14. The method to be used to measure the actual NO_x emission rate of the combustion source;

15. The name and business telephone number of the person responsible for recordkeeping and reporting under N.J.A.C. 7:27-19.19 and under (e)8 below; and

16. Any other information that the Department requests, which is reasonably necessary to enable it to determine whether the operation of combustion sources included in the plan will comply with the requirements of this section.

(d) The Department shall approve an innovative control technology plan only if the following requirements are satisfied:

1. The application satisfies all the requirements of N.J.A.C. 7:27-19.14 and (c) above, including the requirement that the plan consider all control technologies available for the control of NO_x emissions during the interim period from each type of combustion source included in the plan;

2. The innovative control technology proposed for each combustion source in the plan:

i. Has a substantial likelihood of enabling the source to achieve greater continuous NO_x emissions reductions than are required to meet the applicable limit under N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10. If the expected extent of NO_x emission reductions is only marginally greater than are required to meet the applicable limit, the proposed innovative control technology will not be deemed to meet this standard;

ii. Is technically sound;

iii. Is sufficiently developed so that it can be implemented by May 1, 1999 (or by November 7, 2009 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)); and

iv. Cannot practicably be implemented by May 31, 1995 (or by March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)).

3. The completion date listed in (c)5v above is no later than May 1, 1999;

4. For any control technologies described in (c)7 above that the owner or operator does not propose to use with the combustion source during the interim period, the proposed plan demonstrates that the control technology:

i. Would be ineffective in controlling NO_x emissions from the combustion source;

ii. Is unsuitable for use with the combustion source, or duplicative of control technology which the plan proposes to use;

iii. Would carry costs disproportionate to the improvement in the reduction of the NO_x emissions rate that the control technology is likely to achieve, or disproportionately large in comparison to the total reduction in NO_x emissions that the control technology is likely to achieve during the interim period; or

iv. Would carry costs disproportionate to the costs incurred for the control of NO_x emissions from the same type of combustion sources used by other persons in the owner or operator's industry who are also subject to the NO_x RACT requirements of P.L. 101-549, 182(f).

5. For each combustion source included in the plan, the interim emission limit proposed under (c)13 above is the lowest rate that can practicably be achieved at a cost within the limits described in (d)4iii and iv above;

6. For each combustion source included in the plan, the cost of achieving an additional emission reduction beyond the interim emission limit proposed under (c)13 above would be disproportionate to the size and environmental impact of that additional emission reduction; and

7. The owner or operator has entered into an agreement with the Department in accordance with the requirements of (h) below.

(e) An owner or operator who has obtained the Department's approval of an innovative control technology plan shall:

1. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), operate all combustion sources included in the approved plan in a manner that complies with the plan and with all conditions of the Department's approval;

2. Meet the compliance milestones in the approved plan;

3. Implement the innovative control technology for the combustion sources included in the plan by the date specified in the approved plan;

4. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), determine the actual NO_x emissions from each combustion source included in the innovative control technology plan in accordance with N.J.A.C. 7:27-19.15(a);

5. If the approved plan provides for the owner or operator to annually adjust the combustion process for a combustion source included in the plan, do so in accordance with the general procedures set forth at N.J.A.C. 7:27-19.16 before May 1 of each calendar year beginning with 1995, until the innovative control technology is implemented;

6. Beginning on May 31, 1995 (or on March 7, 2007 for any facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set forth at N.J.A.C. 7:27-19.5(d), 19.7(h), or 19.8(e)), comply with the recordkeeping and reporting requirements of N.J.A.C. 7:27-19.19;

7. Within 15 days after the date specified in the approved innovative control technology plan for completion of a milestone listed in (c)5 above, notify the Department in writing that the milestone has or has not been completed. If the milestone has not been completed, the owner or operator shall include in the notice the reason for the delay and the expected date on which the milestone will be completed;

8. Incorporate advances in the art of air pollution control into each source included in the plan, as required in the preconstruction permit for the replacement equipment; and

9. If the innovative control technology for any combustion source included in the plan is not implemented by May 1, 1999, cease operating the combustion source by May 1, 1999, except if any owner or operator of a facility, equipment or source operation that is subject to a NO_x emissions limit under this subchapter as set

forth at N.J.A.C. 7:27-19.5(d), 19.7(h), 19.8(e) does not implement by November 7, 2009 the innovative control technology for the combustion source included in its innovative control technology plan, the equipment or source must comply with the applicable NO_x emissions limit set forth in this subchapter by November 7, 2009.

(f) Except as provided in (g) below:

1. The Department shall seek comments from the general public before making any final decision to approve or disapprove a proposed innovative control technology plan. The Department shall publish notice of opportunity for public comment in a newspaper of general circulation in the area in which each combustion source included in the plan is located;

2. The Department shall submit any innovative control technology plan (and agreement under (h) below) approved under this section to EPA, as a proposed revision to New Jersey's State Implementation Plan; and

3. Upon EPA's approval of the revision to New Jersey's State Implementation Plan, the innovative control technology plan and agreement under (h) below shall be federally enforceable. Plans listed under (g) below shall be federally enforceable upon the issuance of the Department's approval.

(g) An innovative control technology plan approved under this section is not required to be submitted to EPA as a proposed revision to New Jersey's State Implementation Plan, if the plan provides that NO_x emissions from each combustion source included in the plan will be controlled during the interim period through one of the following methods:

1. Fuel switching under N.J.A.C. 7:27-19.20;

2. The use of selective non-catalytic reduction.

(h) Before the Department approves an innovative control technology plan, the owner or operator shall enter into a Federally enforceable agreement containing the following provisions:

1. Information sufficient to identify the owner or operator;

2. Information sufficient to identify the combustion source, including a brief description (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, the company stack designation, and any other identifying numbers, and any other information necessary to distinguish it from other equipment owned or operated by the owner or operator;

3. The owner or operator's undertaking of the following duties:

i. Completing the milestones listed in (c)5 above by specified dates;

ii. Implementing interim measures to control NO_x emissions from each combustion source during the interim period;

iii. Causing each combustion source to emit NO_x at a rate no greater than a specified interim NO_x emission limit applicable during the interim period;

iv. Using a specified method to measure the actual NO_x emission rate of the combustion source; and

v. Maintaining the Department's approval in effect;

4. A provision for delay of compliance caused by a "force majeure" event beyond the control of and without the fault of the owner or operator;

5. A provision under which the Department can terminate the agreement and its approval of the innovative control technology plan if the owner or operator materially fails to complete implementation of the innovative control technology or any other milestone by the date specified in the approved plan, or if the innovative control technology program fails to achieve the required reduction levels. By the date specified by the Department in the agreement, in its approval of the plan, or in the notice of termination, the owner or operator shall attain compliance with the NO_x emissions limit under this subchapter that would apply to the combustion source in the absence of an approved plan. Termination of the agreement and the approval of the plan is in addition to any other remedies the Department has under this chapter and N.J.A.C. 7:27A; and

6. Other provisions necessary to make the agreement federally enforceable, to accomplish the purposes of this subchapter, or to allow the agreement to be administered effectively.

7:27-19.24 (Reserved)

7:27-19.25 Exemption for emergency use of fuel oil

(a) If a combustion source temporarily combusts fuel oil or other liquid fuel in place of natural gas in accordance with this section, the owner or operator is not required to have the combustion source comply with the applicable NO_x emission limits in N.J.A.C. 7:27-19.4, 19.5, 19.7, 19.8, 19.9 or 19.10, or an applicable NO_x emission limit established under N.J.A.C. 7:27-19.13, 19.20, 19.21, 19.22 or 19.23, while the fuel oil or other liquid fuel is burned. On each day that this exemption applies, for purposes of calculating daily or annual NO_x emissions the combustion source will be deemed to have emitted no NO_x and to have derived a heat input of 0.0 BTU.

(b) The exemption under (a) above is available only for a combustion source that uses natural gas as its primary fuel, or is seasonally combusting natural gas pursuant to a plan approved under N.J.A.C. 7:27-19.14 and 19.20. For a combustion source that uses natural gas as its primary fuel, the exemption under (a) above is available at any time during the year. For a combustion source that is seasonally combusting natural gas, the exemption under (a) above is available only from May 1 through September 30. This exemption is also available for those combustion sources which combust refinery gas as a primary fuel.

(c) The owner or operator of the combustion source is eligible for the exemption under (a) above only if the following requirements are met:

1. The owner or operator is not practicably able to obtain a sufficient supply of natural gas;

2. The owner or operator's inability to obtain natural gas is due to circumstances beyond the control of the owner or operator, such as a natural gas curtailment;

3. The combustion source ceases using fuel oil or other liquid fuel in place of natural gas and resumes using natural gas as soon as a sufficient supply of natural gas becomes practicably available; and

4. The owner or operator satisfies the recordkeeping requirements of N.J.A.C. 7:27-19.19(d) and (e), and the reporting requirements of (d) below.

(d) The owner or operator shall keep records of curtailment periods and incorporate such records into the reports submitted to the Department as required at N.J.A.C. 7:27-19.19(g). Such records shall include the following information:

1. Information sufficient to identify each combustion source for which the owner or operator claims an exemption under this section, including a brief description of the source (for example, "dry-bottom coal-fired boiler serving an electric generating unit"), its location, its permit number, any other identifying numbers, and any other information necessary to distinguish it from other equipment also owned or operated by the owner or operator of the electric generating unit;

2. A statement that the owner or operator is not practicably able to obtain a sufficient supply of natural gas;

3. The date and time at which the owner or operator first became practicably unable to obtain natural gas; and

4. A description of the circumstances causing the owner or operator's inability to obtain natural gas.

7:27-19.26 Penalties

Failure to comply with any provision of this subchapter shall subject the owner or operator to civil penalties in accordance with N.J.A.C. 7:27A-3 and applicable criminal penalties including, but not limited to, those set forth at N.J.S.A. 26:2C-28.3 and N.J.S.A. 26:2C-19(f)1 and 2.

7:27-19.27 (Reserved)

7:27-19.28 Sewage sludge incinerators

(a) The owner or operator of a sewage sludge incinerator shall cause it to emit NO_x at a rate no greater than the applicable maximum allowable NO_x emission rate specified in Table 13 below, unless the owner or operator is complying with N.J.A.C. 7:27-19.3(f).

TABLE 13
Maximum Allowable NO_x Emission Rates for
Sewage Sludge Incinerators
(pounds of NO_x per ton of dry sewage sludge)

Multiple Hearth	7.0
Fluidized Bed	2.5

(b) In lieu of complying with the maximum allowable NO_x emissions rate at (a) above, the owner or operator of a sewage sludge incinerator may comply with N.J.A.C. 7:27-19.3(f), or obtain an alternative maximum allowable NO_x emission rate approved by the Department pursuant to N.J.A.C. 7:27-19.13.

(c) The owner or operator shall demonstrate compliance with (a) or (b) above in accordance with N.J.A.C. 7:27-19.15(a)2.

7:27-19.29 2009 HEDD Emission Reduction Compliance Demonstration Protocol

(a) This section shall apply to any owner or operator of a HEDD unit, or their successors or assigns, that operated on July 26, 2005, and that meets the following:

1. If a HEDD unit is a combustion turbine and was not controlled by water injection or SCR, or is a boiler and was not controlled by SCR or SNCR; and

2. The NO_x emission rate of a HEDD unit was 0.15 pounds per MMBTU or greater. To determine the emissions rate of the HEDD unit, the owner or operator shall obtain the emission rate, in lb/MMBtu, for the HEDD unit for July 26, 2005 from the USEPA Clean Air Markets Division (CAMD) NO_x emission data, which as of March 20, 2009 can be found at http://camddataandmaps.epa.gov/gdm/.

(b) Each owner or operator identified in (a) above shall:

1. Prepare a 2009 HEDD Emission Reduction Compliance Demonstration Protocol, hereafter referred to as the 2009 Protocol, in accordance with (d) below. Each emission reduction measure that is used to obtain emission reductions shall be included in the 2009 Protocol;

2. Submit to the Department, at the address at (b)5 below, by May 19, 2009, a 2009 Protocol;

3. Obtain the NO_x emission reductions determined by Equation 1 at (c) below, using one or more measures that meet the requirements at (d) below and that are listed in the 2009 Protocol, on each high electric demand day starting on May 19, 2009 through September 30, 2014, unless the Department has approved, pursuant to N.J.A.C. 7:27-19.22, a phased compliance plan with an initial compliance date that is after May 19, 2009;

4. Demonstrate that all NO_x emission reductions required by (b)3 above were obtained. The owner or operator shall include this demonstration in the annual report at (k) below. Conduct any demonstration using:

   i. Calculations that demonstrate that the owner or operator achieved all emission reductions required at (b)3 above; or

   ii. The Department-approved method of demonstrating in the 2009 Protocol that implementation of the 2009 Protocol on each high electric demand day that occurred starting January 1, 2005 through December 31, 2007 would have resulted in at least as many tons of NO_x emission reductions as would have been required by Equation 1 below. The owner or operator shall demonstrate that the owner or operator implemented the 2009 Protocol, or a modified protocol approved by the Department pursuant to (h) below, on each high electric demand day during the calendar year of the applicable annual report; and

5. Submit to the Department, at the address below, an annual report, pursuant to (k) below.

   Department of Environmental Protection
   Division of Air Quality
   Air Quality Permitting Program
   Bureau of Air Permits
   401 East State Street
   Mail Code 401-02
   PO Box 420
   Trenton, NJ 08625-0420

(c) The owner or operator shall obtain the NO_x emission reductions determined by Equation 1 on each high electric demand day pursuant to (b)3 above. Equation 1 is:

$$ER = (BE \div EF) \times RF$$

Where:

ER, BE, EF and RF are in units of tons of NO_x per high electric demand day (t/HEDD);

ER (Emission Reduction) = The total tons of NO_x reductions that is required from an owner or operator on each high electric demand day;

BE (Baseline Emission) = The total tons of NO_x that would be emitted on each high electric demand day, if the owner or operator did not implement any emission reduction measures. This calculation is based on total actual operation of HEDD units and total actual operation of new electric generating units installed to replace one or more HEDD units for that high electric demand day;

EF (Emission Factor) = The total tons of NO_x that were emitted by all of the owner or operator's HEDD units on July 26, 2005. In order to calculate EF, the owner or operator shall obtain the NO_x emitted, in tons, for each HEDD unit operated on July 26, 2005, from the EPA Clean Air Markets Division (CAMD) NO_x emission data, which as of March 20, 2009 can be found at http://camddataandmaps.epa.gov/gdm/; and

RF (Reduction Factor) = The HEDD NO_x emission reduction factor for each owner or operator shall be the sum of all Unit Reduction Factors (URF). A URF shall be calculated, in tons, for each HEDD unit that operated on July 26, 2005, using the following equation:

$$URF = (UE \times C)$$

Where:

URF (Unit Reduction Factor) = The reduction of NO_x emissions, in tons, emitted by a HEDD unit on July 26, 2005 that would have occurred if the unit had been controlled;

UE (Unit Emissions) = The tons of NO_x emissions emitted by a HEDD unit on July 26, 2005 obtained from the EPA Clean Air Markets Division (CAMD) NO_x emission data, which as of March 20, 2009 can be found at http://camddataandmaps.epa.gov/gdm/; and

C (Control Factor) = If the HEDD unit is a combustion turbine that was not controlled with water injection or Selective Catalytic Reduction (SCR) on July 26, 2005, and the NO_x emission rate of that unit was 0.15 lb/MMBtu or greater on July 26, 2005, then C is equal to 0.4. If the HEDD unit is a boiler that was not controlled with SCR or Selective Non-Catalytic Reduction (SNCR) controls on July 26, 2005, and the NO_x emission rate of that unit was 0.15 lb/MMBtu or greater on July 26, 2005, then C is equal to 0.3. If the HEDD unit is a combustion turbine that was controlled with water injection or SCR on July 26, 2005, or is a boiler that was controlled with SCR or SNCR on July 26, 2005, or had a NO_x emission rate of less than 0.15 lb/MMBtu on July 26, 2005, then C is equal to 0.

(d) The 2009 Protocol shall include the following:

1. The calculations performed in (c) above for EF and RF;

2. A list of measures used to obtain the required emission reductions determined by Equation 1. The measures must result in emission reductions that are real, quantifiable, enforceable, surplus, and are not required to comply with any State or Federal permit, regulation, enforceable agreement, or high electric demand day emission reduction program. Any of the following measures may be considered to achieve the required emission reductions:

   i. Installation of a control apparatus on an existing HEDD unit that is located in New Jersey, Pennsylvania, Delaware, or Maryland;

   ii. Reduction in the usage of any HEDD unit that is located in New Jersey, Pennsylvania, Delaware, or Maryland;

   iii. Installation of a control apparatus on an existing non-HEDD unit that is located in New Jersey, Pennsylvania, Delaware, or Maryland;

   iv. Commitment to combust natural gas in any HEDD unit that is permitted to combust either natural gas or fuel oil during high electric demand days when it would be economically preferred to combust fuel oil;

   v. Implementation of an energy efficiency measure in New Jersey, as long as the energy efficiency measure was not committed to prior to May 19, 2009;

   vi. Implementation of a demand response measure in New Jersey such as:

      (1) A measure that shifts load, as long as the demand response measure was not committed to prior to May 19, 2009; or

      (2) A measure that sheds load to clean distributed generation units, as long as the demand response measure was not committed to prior to May 19, 2009;

   vii. Implementation of a renewable energy measure in New Jersey, as long as the renewable energy measure was not committed to prior to May 19, 2009; and

   viii. Any other measure, approved by the Department, that provides NO_x emission reductions and ozone air quality benefits to New Jersey.

3. The 2009 Protocol shall include, at a minimum, the following for each measure:

i. A complete description of the measure;

ii. A quantification of the emission reductions from the measure and how the quantification was determined;

iii. The reasons why this measure is not necessary under any current State or Federal permit, regulation, enforcement agreement, or high electric demand day emission reduction program;

iv. The methods to be used to calculate and verify emission reductions;

v. Monitoring requirements to ensure that the emission reductions determined by Equation 1 are achieved. This shall include, but not be limited to, the following, as applicable, for each electric generating unit:

(1) Fuel flow/firing rate instrument to monitor fuel consumption;

(2) CEMs monitoring of NO_x emissions or monitoring of any parameter that can be used to calculate the NO_x emissions; and

(3) Stack testing; and

vi. A list of records to be maintained pursuant to the requirements of N.J.A.C. 7:27-19.19. The records maintained should be sufficient to document that the emission reductions determined by Equation 1 are achieved. This shall include, but not be limited to the records, as applicable, listed in (e) below, for each high electric demand day.

(e) The list of records to be maintained pursuant to (d)3vi above are the following:

1. The date of each high electric demand day;

2. The actions taken to reduce emissions;

3. The start and end time for operation of each EGU operated during that high electric demand day;

4. The total hours of operation for each EGU in (e)3 above;

5. The type of fuel combusted by each EGU in (e)3 above;

6. The hourly fuel use for each EGU in (e)3 above;

7. The hourly load in MW for each EGU in (e)3 above;

8. The hourly heat input in MMBtu/hr to each EGU in (e)3 above;

9. The hourly water injection rate for each EGU in (e)3 above;

10. The hourly ammonia injection rate for each EGU in (e)3 above;

11. The catalytic bed temperature for each EGU in (e)3 above;

12. The CEM values or documentation on how the baseline and actual NO_x emission rates were calculated for each EGU in (e)3 above;

13. Any other data needed to calculate baseline and actual NO_x emissions for each EGU in (e)3 above;

14. Calculations and results for the following:

    i. Baseline NO_x emissions (BE in Equation 1, at (c) above);

    ii. Actual NO_x emissions after 2009 Protocol control measures, calculated pursuant to the approved 2009 Protocol;

    iii. Required NO_x emission reduction (ER in Equation 1, at (c) above); and

    iv. Actual NO_x emission reduction (BE - actual emissions resulting from 2009 Protocol measures);

15. The fuel prices for that high electric demand day; and

16. Any other records necessary to document the emission reductions achieved.

(f) Within 30 calendar days after receiving a proposed 2009 Protocol, the Department will notify the owner or operator in writing whether the proposed 2009 Protocol includes all of the information required under (d) above. If the proposed 2009 Protocol is incomplete:

1. The Department will include in the notice a list of the deficiencies, a statement of the additional information required to make the proposed 2009 Protocol complete, and a time by which the owner or operator must submit a complete proposed 2009 Protocol;

2. The owner or operator shall correct the deficiencies listed in the Department's notice within the time stated in the Department's notice; and

3. The Department may disapprove the proposed 2009 Protocol if the owner or operator fails to correct the deficiencies within the time stated in the Department's notice.

(g) The Department may approve, revise and approve, or disapprove the proposed 2009 Protocol based on whether or not the proposed 2009 Protocol contains the contents required by (d) above. Except for (g)3 below, until the Department approves a proposed 2009 Protocol, implementation of the proposed 2009 Protocol constitutes compliance with (b)3 above. The Department will notify the owner or operator of the Department's action in writing as follows:

1. If the Department approves the proposed 2009 Protocol, the Department will notify the owner or operator in writing of the Department's approval;

2. If the Department revises the proposed 2009 Protocol and approves the revised proposed 2009 Protocol, the Department will notify the owner or operator in writing of the Department's revision and approval. In this notification the Department will list all revisions the Department made to the proposed 2009 Protocol, and include a compliance schedule if time is necessary to implement the revisions; or

3. If the Department disapproves the proposed 2009 Protocol, the Department will notify the owner or operator in writing of the Department's disapproval. In this notification the Department will include a list of the reasons for disapproval and a list of changes or additional information needed to make the proposed 2009 Protocol compliant with (d) above and approvable. If the owner or operator does not submit a revised proposed 2009 Protocol, with all information required by the Department's notification, to the Department at the address at (b)5 above within 60 days of receiving the Department's notification, then one of the following shall apply:

   i. If the owner or operator fails to submit a revised proposed 2009 Protocol by the deadline, implementation of the proposed 2009 Protocol shall no longer constitute compliance with (b)3 above after the deadline; or

   ii. If the owner or operator submits a revised proposed 2009 Protocol that does not include all information required by the Department's notification, implementation of the proposed 2009 Protocol shall no longer constitute compliance with (b)3 above after the Department notifies the owner or operator that the revised proposed 2009 Protocol is still not approvable.

(h) The owner or operator may revise the 2009 Protocol at any time as follows:

1. The owner or operator shall submit to the Department, at the address at (b)5 above, a proposed revised 2009 Protocol. The proposed revised 2009 Protocol shall include all the information required by (d) above;

2. The Department will notify the owner or operator of any deficiencies pursuant to (f) above; and

3. The Department will approve, revise and approve, or disapprove the proposed revised 2009 Protocol based on whether or not the proposed 2009 Protocol contains the contents required by (d) above. The Department will notify the owner or operator of the action in writing.

(*i*) If the owner or operator of an electric generating unit that is included in an approved 2009 Protocol changes between May 19, 2009 and September 30, 2014, the old owner or operator shall submit a revised 2009 Protocol to the Department, at the address in (b)5 above, within 30 calendar days of the change taking place, for approval in accordance with (h) above. The revised 2009 Protocol shall demonstrate that all required emission reductions will continue to be obtained, and shall clearly define how the required emission reductions will be obtained henceforth and which owner or operator shall be responsible for achieving the required emission reductions. Any shared responsibility for the emission reductions shall be clearly defined in the revised 2009 Protocol.

(j) An owner or operator may implement any emission reduction measure that meets the requirements at (d) above if the owner or operator has obtained all necessary permit modifications pursuant to N.J.A.C. 7:27-8 and 22, submits a revised 2009 Protocol to the Department at the address at (b)5 above within 30 days of implementing the measure, and maintains compliance with all other applicable provisions of N.J.A.C. 7:27.

(k) Each owner or operator identified in (a) above shall submit an annual report for calendar years 2009 through 2014. Each annual report shall be submitted to the Department to the address at (b)5 above, by January 30th of the following year. (For example, the annual report for 2009 is due on January 30, 2010.) At a minimum, the annual report shall include the following information, as applicable, for each measure and each high electric demand day:

1. The actions taken to reduce emissions;

2. The baseline and actual emissions in total tons;

3. For measures not associated with an EGU unit, the annual report shall include any documentation required by the approved 2009 Protocol; and

4. For measures associated with an EGU unit, the annual report shall include:

i. The total hours of operation for each EGU;

ii. The type of fuel combusted;

iii. The hourly fuel use;

iv. The hourly load in MW;

v. The hourly heat input in MMBtu/hr;

vi. The hourly water injection rate;

vii. The hourly ammonia injection rate;

viii. The catalytic bed temperature;

ix. The CEM values or documentation on how the baseline and actual NO_x emission rates were calculated;

x. Any other data used to calculate baseline and actual NO_x emissions;

xi. The calculations and results for:

(1) Baseline NO_x emissions (BE in Equation 1, at (c) above);

(2) Actual NO_x emissions after emission reduction measures;

(3) Required NO_x emission reduction (ER in Equation 1, at (c) above); and

(4) Actual NO_x emission reduction (BE - actual emissions after emission reduction measures);

xii. Fuel prices; and

xiii. Any other documentation required by the Department in the approved 2009 Protocol.

7:27-19.30 2015 HEDD Emission Limit Achievement Plan

(a) Each owner or operator of an HEDD unit shall submit to the Department at the address below, by May 1, 2010, a 2015 HEDD Emission Limit Achievement Plan, hereafter referred to as the 2015 Plan.

Assistant Director, Air Quality Permitting Element
Division of Air Quality
New Jersey Department of Environmental Protection
401 East State Street
PO Box 027
Trenton, NJ 08625-0027

(b) The 2015 Plan shall describe how the owner or operator intends to comply with the 2015 HEDD maximum allowable NO_x emission rates for each HEDD unit owned or operated. The 2015 Plan shall include the following:

1. A list of HEDD units that are expected to be taken out of service by May 1, 2015, in lieu of complying by May 1, 2015 with the applicable maximum allowable NO_x emission rate(s) in Table 3 at N.J.A.C. 7:27-19.4(a) for boilers or Table 7 at N.J.A.C. 7:27-19.5(g) for turbines. The following information shall be included for each HEDD unit that is expected to be taken out of service:

    i. The name of the facility at which the HEDD unit is located;

    ii. The facility ID number;

    iii. The emission unit ID number;

    iv. The HEDD unit description;

    v. The proposed schedule for taking the unit out of service;

    vi. An explanation of any obstacles that may prevent this unit from being taken out of service according to the schedule at (b)1v above; and

    vii. Any other documentation that would identify the unit or clarify the above information; and

2. A list of HEDD units on which the owner or operator proposes to install a control apparatus, or for which the owner or operator proposes to operate differently, in order to obtain compliance with the applicable maximum allowable NO_x emission rate(s) in Table 3 at N.J.A.C. 7:27-19.4(a) for boilers or Table 7 at N.J.A.C. 7:27-19.5(g) for turbines. The following information shall be included for each such HEDD unit:

    i. The name of the facility at which the HEDD unit is located;

    ii. The facility ID number;

    iii. The emission unit ID number;

    iv. The HEDD unit description;

    v. A description of the proposed control apparatus or change to the current operation;

    vi. An explanation of what the expected emission control efficiency will be and what emission rate will be achievable with the proposed control apparatus or change to the current operation;

vii. The proposed schedule for permitting, installation and operation of the proposed control apparatus or change to the current operation;

viii. An explanation of any obstacles that may prevent the installation of the proposed control apparatus or change to the current operation; and

ix. Any other documentation that would identify the unit or clarify the above information; and

3. A list of HEDD units that have demonstrated compliance, in accordance with N.J.A.C. 7:27-19.15, with the applicable maximum allowable NO_x emission rate(s) in Table 3 at N.J.A.C. 7:27-19.4(a) for boilers or Table 7 at N.J.A.C. 7:27-19.5(g) for turbines, prior to May 1, 2010. The following information shall be included for each such HEDD unit:

i. The name of the facility at which the HEDD unit is located;

ii. The facility ID number;

iii. The emission unit ID number;

iv. The HEDD unit description; and

v. The maximum allowable NO_x emission rate in the preconstruction permit or the operating permit for the HEDD unit, for each fuel combusted by the unit.

(c) The owner or operator of a HEDD unit shall prepare an update on the owner or operator's progress in complying with the 2015 Plan as follows:

1. An owner or operator of a HEDD unit shall prepare an update for each calendar year 2010 through 2014 if, on January 1 of that calendar year, any of the owner or operator's HEDD units:

i. Did not comply with the applicable maximum allowable NO_x emission rate(s) in Table 3 at N.J.A.C. 7:27-19.4(a) for boilers or Table 7 at N.J.A.C. 7:27-19.5(g) for turbines; and

ii. Was not taken out of service;

2. The owner or operator shall submit an update required by (c)1 above by January 30 after the calendar year of the update. For example, an update for calendar year 2010 shall be submitted to the Department by January 30, 2011;

3. The owner or operator shall submit each update to the following address:

Department of Environmental Protection
Division of Air Quality
Air Quality Permitting Program
Bureau of Air Permits
401 East State Street
Mail Code 401-02
PO Box 420
Trenton, NJ 08625-0420; and

4. An update shall include the following information for each HEDD unit meeting the criteria at (c)1i through iii above:

   i. The name of the facility at which the HEDD unit is located;

   ii. The facility ID number;

   iii. The emission unit ID number;

   iv. The HEDD unit description;

   v. The progress made toward achieving the proposed schedule for permitting, installation and operation at (b)2vii above;

   vi. An explanation of any obstacles that have been encountered or are anticipated and how they will be overcome; and

   vii. An explanation of any revisions to the 2015 Plan.

APPENDIX (Reserved)