

Sec. 1. Section 22a-174-22 of the Regulations of Connecticut State Agencies is amended to read as follows:

Control of Nitrogen Oxides Emissions

(a) Definitions

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

(1) "CAIR NOx Ozone Season unit" means a unit that is a CAIR NOx Ozone Season unit as defined in 40 CFR 96.302 or satisfies the criteria in one of the following subparagraphs:

(A) Is a fossil-fuel-fired emission unit that operated at any time during the period from May through September 1990 and that serves a generator with a nameplate capacity between fifteen (15) and twenty-five (25) megawatts,

(B) Is a fossil-fuel-fired emission unit that serves a generator that generates electricity at a rated output of fifteen (15) megawatts or more by employing "cogeneration technology," as defined in section 16-1(a)(21) of the Connecticut General Statutes,

(C) Is a fossil-fuel-fired boiler or indirect heat exchanger with a maximum design heat input of 250 MMBtu/hr or more, or

(D) Is a fossil-fuel-fired emission unit that began operating after September 30, 1990 and that serves a generator that generates electricity at a rated output between fifteen (15) and twenty-five (25) megawatts;

[(1)] (2) "Contract", means: (A) an agreement between a utility and a customer (or other person) to provide electricity; or (B) a change in any agreement between a utility and a customer (or other person) to provide electricity[.] ;

[(2)] (3) "Electricity supplier" means "electric supplier" as defined in section 16-1(a)(30) of the Connecticut General Statutes, and "municipal electric utility" as defined in section 7-233b(8) of the Connecticut General Statutes[.] ;

(4) "Electric generating unit" or "EGU" means a fossil-fuel-

fired emissions unit that serves a generator that generates electricity at a rated output of fifteen (15) megawatts or more;

[(3)](5) "Emergency engine" means a stationary reciprocating engine or a gas turbine engine [which] that is used as a means of providing mechanical or electrical power only during periods of testing and scheduled maintenance or during either an emergency or in accordance with a contract intended to ensure an adequate supply of electricity for use within the state of Connecticut during the loss of electrical power derived from nuclear facilities. The term does not include an engine for which the owner or operator of such engine is party to any other agreement to sell electrical power from such engine to a utility, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability[.] ;

[(4)](6) "Emergency" means an unforeseeable condition that is beyond the control of the owner or operator of an emergency engine and that:

- (A) Results in an interruption of electrical power from the utility to the premises;
- (B) Results in a deviation of voltage from the utility to the premises of three percent (3%) above or five percent (5%) below standard voltage in accordance with subsection (a) of section 16-11-115 of the Regulations of Connecticut State Agencies (RCSA);
- (C) Requires an interruption of electrical power from the utility to the [premise] premises enabling the owner or operator to perform emergency repairs;
- (D) Requires operation of the emergency engine to minimize damage from fire, flood, or any other catastrophic event, natural or man-made; or
- (E) Notwithstanding section 22a-174-22(a) [(3)] (5) of the Regulations of Connecticut State Agencies, requires operation of the emergency engine under an agreement with the New England region system operator during the period of time the New England region system operator is implementing voltage reductions or involuntary load interruptions within the Connecticut load zone due to a capacity deficiency[.] ;

(7) "Full load emission rate" or "FLER" means the NOx emission

rate from the subject emission unit, based on the results of the most recent emissions test conducted in accordance with subsection (k) (2) of this section approved by the Commissioner or the Commissioner's designee increased by at least ten percent (10%), that is used to determine the number of NOx allowances needed to offset excess NOx emissions from the subject emission unit.

[(5)](8) "Gas" or "gaseous fuel" means natural gas, propane, or any other fuel that is in the gaseous state under standard conditions[.] ;

(9) "Gas turbine engine" means a stationary internal combustion engine that continuously converts an air-fuel mixture into rotational mechanical energy through the use of moving blades attached to a rotor;

[(6)](10) "gm/bk hp-hr" means grams per brake horsepower-hour[.] ;

[(7)](11) "lb" means pound[.] ;

[(8)](12) ["MMBTU"] "MMBtu" means million [BTU] Btu of heat input[.] ;

[(9)](13) ["MMBTU/hr"] "MMBtu/hr" means million [BTU] Btu of heat input per hour[.] ;

[(10)](14) "MRC" means maximum rated capacity[.] ;

[(11)] "Major stationary source of NOx" means a premises with potential emissions of NOx equal to or greater than fifty (50) tons per year in a serious nonattainment area for ozone, or twenty-five (25) tons per year in a severe nonattainment area for ozone.]

(15) "NOx Allowance" means the limited authorization to emit one (1) ton of NOx during a specified control period each year as defined in Section 22a-174-22c of the Regulations of Connecticut State Agencies;

[(12)] NOx Budget Program source" means:

- (A) A fossil-fuel-fired stationary source that serves a generator with a nameplate capacity of fifteen megawatts (15 MW) or more; or
- (B) A fossil-fuel-fired boiler or indirect heat exchanger with a maximum heat input capacity of 250 MMBtu or

more.]

[(13) "NOx discrete emission reduction credit" or "NOx DERC" means the reduction of one ton of NOx at a source during a discrete period of time, which the commissioner has certified as real, quantifiable, surplus, permanent, and enforceable.]

[(14) "Other boiler" means a boiler that is not a cyclone furnace, fast-response double-furnace naval boiler, or fluidized-bed combustor.]

[(15)](16) "Other oil" means a fuel that is liquid at standard conditions and is not residual oil[.] ;

[(17) "Ozone forecast" means the eight (8) hour ozone forecast issued on day in advance by the Commissioner or the Commissioner's designee and posted on the Department's website as 'Eight-hour Ozone Forecast For The Regulated Community'.

[(16)] (18) "ppmvd" means parts per million by volume on a dry basis[.] ;

[(19) "Peaking unit" means an electric generating unit in any year since 2001 that has had an average annual capacity factor of 10.0 percent or less in any three consecutive years, and an annual capacity factor of 20.0 percent or less in any year;

[(17) "Premises" means "premises" as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.]

[(18)] (20) "Reciprocating engine" means a stationary internal combustion engine having a crankshaft turned by linearly reciprocating pistons[.] ;

[(19)] (21) "Selective noncatalytic reduction" means emission control technology [which] that involves the injection of a chemical reagent at high flue gas temperatures to selectively reduce NOx emissions to nitrogen and water[.] ; and

[(20) "Turbine engine" means a stationary internal combustion engine which continuously converts an air-fuel mixture into rotational mechanical energy through the use of moving vanes attached to a rotor.]

[(21)] (22) "Waste combustor" means an incinerator as defined in [subsection] section 22a-174-18(a) of the Regulations of Connecticut State Agencies, a resources recovery facility as defined in section 22a-207 of the Connecticut General Statutes, or a sewage sludge incinerator. The term does not include a

flare or an industrial fume incinerator.

(b) Applicability

(1) [This section applies to the owner or operator of:] The owner or operator of a premises:

(A) [Any of the following sources, provided such sources are located at a major stationary source of NOx:] With actual NOx emissions in any calendar year since 1990 of greater than or equal to twenty-five (25) tons in Fairfield, Middlesex and New Haven Counties or fifty (50) tons in Hartford, New London, Tolland, Windham and Litchfield Counties shall comply and continue to comply with subsections (d) through (o) of this section for as long as the subject premises is operational.

[(i) A reciprocating engine with a maximum rated capacity of three (3) MMBTU/hr or more;

(ii) Fuel-burning equipment, other than a reciprocating engine, with a maximum rated capacity of five (5) MMBTU/hr or more;

(iii) Equipment that combust fuel for heating materials and that has a maximum rated capacity of five (5) MMBTU/hr or more; or

(iv) A waste combustor with a design capacity of two thousand (2000) pounds or more of waste per hour.]

(B) [Fuel-burning equipment, a waste combustor, or a process source that has potential emissions of NOx in excess of the following:] Not otherwise subject to subparagraph (A) of this subdivision, with potential NOx emissions greater than or equal to twenty-five (25) tons in Fairfield, Middlesex and New Haven Counties or fifty (50) tons in Hartford, New London, Tolland, Windham and Litchfield Counties; shall comply with subsections (l) and (n) of this section for as long as such premises has such potential emissions.

[(i) One hundred thirty-seven (137) pounds during any day from May 1 to September 30, inclusive, of any year, if such source is located in a severe nonattainment area for ozone; or

(ii) Two hundred seventy-four (274) pounds during any day from May 1 to September 30, inclusive, of any year, if such source is located in a serious nonattainment area for ozone.]

(2) [Subsections (d) to (k), inclusive, of this section shall not apply to the owner or operator of a source if the actual emissions of NOx since January 1, 1990 from the premises at which such source is located have not exceeded twenty-five (25) tons in any calendar year if such premises are located in a severe nonattainment area for ozone, or fifty (50) tons in any calendar year if such premises are located in a serious nonattainment area for ozone. Notwithstanding this provision, subsection (d) to subsection (k), inclusive, of this section shall apply to such owner or operator if after May 31, 1995, actual emissions of NOx from such premises exceed the following:] The owner or operator of an emission unit:

- (A) [In any calendar year: twenty-five (25) tons for premises located in a severe nonattainment area for ozone, or fifty (50) tons for premises located in a serious nonattainment area for ozone; or] With actual NOx emissions greater than or equal to, on any day from May 1 through September 30 of any calendar year on or after May 31, 1995, one hundred thirty-seven (137) pounds in Fairfield, Middlesex and New Haven Counties or two hundred seventy-four (274) pounds in Hartford, New London, Tolland, Windham and Litchfield Counties shall comply and continue to comply with subsections (d) through (o) of this section for as long as the subject emission unit is operational;
- (B) [On any day from May 1 to September 30, inclusive, of any year: one hundred thirty-seven (137) pounds for premises located in a severe nonattainment area for ozone or two hundred seventy-four (274) pounds for premises located in a serious nonattainment area for ozone.] Not otherwise subject to subparagraph (A) of this subdivision with potential NOx emissions greater than or equal to, on any day from May 1 through September 30 of any calendar year, one hundred thirty-seven (137) pounds in Fairfield, Middlesex and New Haven Counties or two hundred seventy-four (274) pounds in Hartford, New London, Tolland, Windham and Litchfield Counties shall comply with subsections (l) and (n) of this section for as long as such emission unit has such potential emissions;

- (C) Not otherwise subject to subparagraph (A) or (B) of this subdivision or subdivision (1) of this subsection, that is an ICI boiler with a maximum rated capacity of 50 MMBtu/hr or more, shall comply with subsections (d) through (o) of this section for as long as the subject emission unit is operational; or
- (D) Not otherwise subject to subparagraph (A), (B) or (C) of this subdivision or subdivision (1) of this subsection, that is an ICI boiler with a maximum rated capacity of 5 MMBtu/hr or more but less than 50 MMBtu/hr, shall comply with subsections (l) and (n) of this section for as long as the subject emission unit is operational.
- (3) For each premises subject to this section pursuant to subsection (b)(1) of this section or each emission unit subject to this section pursuant to subsection (b)(2) of this section, with respect to an emergency engine, [Subsections] subsections (d) through [(k)] (o) of this section shall not apply to the owner or operator of [an] such emergency engine. In addition, the actual emissions from emergency engines operating during an emergency shall not be included in the determination of the applicability of the subsection (b)(2) [(B)] (A) of this section.
- (4) The owner or operator of an emergency engine shall not include the actual emissions from any such engine for purposes of determining applicability in accordance with subdivision (b)(2) [(B)] (A) of this subsection, provided such emissions result from operation in accordance with a contract with a utility operating pursuant to a permit or order which:
- (A) Requires the permittee to maintain a list which identifies all sources with whom the permittee has a contract;
 - (B) Requires either the permittee or the owner or operator of the emergency engine to record and submit to the Commissioner data on fuel consumption and hours of operation of any emergency engine operating under such contract; and
 - (C) Requires the permittee to obtain NOx emission reductions to offset the NOx emissions that result from the generation of customer-contracted electricity.

(5) For each premises subject to this section pursuant to subsection (b)(1) of this section or each emission unit subject to this section pursuant to subsection (b)(2) of this section, with respect to an emergency engine, [Notwithstanding] notwithstanding subdivision (3) of this subsection, subsections (d) through [(k)](o) of this section shall apply to the owner or operator of [an] such emergency engine if, after May 1, 1997, such engine operates for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be ["moderate to unhealthful," "unhealthful," or "very unhealthful."] "unhealthy for sensitive groups", "unhealthy", or "very unhealthy". The Commissioner or the Commissioner's designee may exempt, by permit or order, the owner or operator of an emergency engine from this subdivision, if such emergency engine is unattended, the testing is automated and cannot be modified from a remote location.

(c) Exemption.

(1) This section shall not apply to the owner or operator of a mobile source.

(2) This section shall not apply to a municipal waste combustor subject to, and operating in compliance with, section 22a-174-38 of the Regulations of Connecticut State Agencies, which, if in existence prior to May 31, 1995 and combusts refuse derived fuel, does not exceed 420 tons per year of NOx emissions from any one emission unit or the NOx emission limit in an applicable permit, which ever is more stringent.

(d) General requirements.

(1) On and after May 31, 1995, the owner or operator of a [stationary source] premises subject to subsection (b)(1)(A) of this section or an emission unit subject to subsection (b)(2)(A) or (b)(2)(C) of this section, for any emission unit identified in subsection (e) of this section, shall:

(A) comply with all applicable daily and seasonal emission limitations for such source in subsection (e) of this section;

[(B) comply with the provisions for multi-fuel sources in subsection (f) of this section;]

[(C) reduce the NOx emission rate from such source by forty percent (40%), pursuant to subsection (g) of

this section, in accordance with a permit issued by the Commissioner;]

~~[(D)](B) [file]submit a permit application, or request an order, to modify the schedule of operations at the source, pursuant to subsection (i) of this section, in accordance with a permit or order issued by the Commissioner or the commissioner's designee [.] ; or~~

~~(C) submit a NOx allowance acquisition plan, as part of the compliance plan submitted in accordance with subsection (m) of this section, to use NOx allowances to meet all applicable daily and seasonal emission limitations for such source in subsection (e) of this section, as long as such submission includes a NOx control strategy evaluation, if applicable, that demonstrates to the satisfaction of the commissioner or the commissioner's designee that there is no other technologically or economically feasible option to meet the applicable emission limits in subsection (e) of this section;~~

(2) On October 1, 2003, and during the period from October 1 to April 30, inclusive, each year thereafter, the owner or operator of a [stationary source] premises subject to subsection (b)(1)(A) of this section or an emission unit subject to subsection (b)(2)(A) or (b)(2)(C) of this section, for any source identified in subsection (e) of this section that is also a [NOx Budget Program source] CAIR NOx Ozone Season unit, shall:

(A) Comply with the emission limitation in subsection (e)(3) of this section; or

(B) Use [NOx DERCS, or] NOx allowances [or both,] pursuant to subsection (j) of this section, to achieve all or a portion of the NOx emission reductions required by the emission limitation in subsection (e)(3) of this section.

(3) The owner or operator of a [stationary source] premises subject to subsection (b)(1)(A) of this section or an emission unit subject to subsection (b)(2)(A) or (b)(2)(C) of this section, [in accordance with an order or permit issued by the Commissioner,] may use [NOx DERCS, and] NOx allowances, pursuant to subsection (j) of this section, to achieve all or a portion of the reductions required by this section. [The Commissioner shall submit such permit or order to the

Administrator for approval in accordance with the provision of 42 U.S.C. 7401-7671q.]

(4) Nothing [herein] in this section shall preclude the Commissioner or the commissioner's designee from issuing an order to an owner or operator of a stationary source subject to this section to comply with the requirements of this subsection.

(5) Copies of documents incorporated by reference into this section identified below in Table 1-1 are available by contacting:

Connecticut Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, Connecticut 06106
(860) 424-3027

Table 1-1

<u>Citation</u>	<u>Title or Subject</u>	<u>Date on Document</u>
<u>Chapter 5</u>	<u>Combustion Efficiency Tables, Taplin, Harry, R., Fairmont Press</u>	<u>1991</u>
	<u>American Society of Mechanical Engineers/ ASME/ANSI Boiler Test Code 4.1;</u>	

(6) Duty to Comply. An owner or operator of an existing or new stationary source subject to this section shall comply with the requirements of this section.

(e) Emission limitations.

(1) The owner or operator of a stationary source subject to this section may, in accordance with [subparagraph] subsection (d) (1) (A) of this section, comply with the requirements of this section by meeting applicable emission limitations specified in Table 22-1 of this section, as determined in accordance with subsection (k) of this section. [Emission limitations in Table 22-1 for turbine engines that are quantified in units of ppmvd shall be corrected to fifteen percent (15%) oxygen.]

(2) For any stationary source for which there is no applicable emission limitation in Table 22-1, the owner or operator of such source shall not cause or allow emissions of NOx therefrom, as determined in accordance with subsection (k) of this section, in excess of the following:

- (A) For fuel-burning equipment fired by a fuel other than those fuels cited in Table 22-1: 0.3 pounds per [MMBTU] MMBtu;
- [(B) For any waste combustor subject to the requirements of subdivision (4) of this subsection: 0.38 pounds per MMBTU;]
- [(C) For any waste combustor not subject to the requirements of subparagraph (2)(B) of this subsection which has a waterwall furnace: 0.38 pounds per MMBTU;]
- [(D)] (B) For any [other] waste combustor with a design capacity of two thousand (2000) pounds or more of waste per hour, not subject to Section 22a-174-38 of the Regulations of Connecticut State Agencies: 0.33 pounds per [MMBTU] MMBtu;
- [(E)] (C) For a glass melting furnace: 5.5 pounds of NOx per ton of glass produced;
- [(F)] (D) For a source, with a maximum rated capacity of five (5) MMBtu/hr or more, other than a glass melting furnace, which burns fuel for heating materials: 180 ppmvd, corrected to twelve percent (12%) carbon dioxide; or
- [(G)] (E) For any source, with a maximum rated capacity of five (5) MMBtu/hr or more, not having an emission limitation in subparagraphs (A) through [(F)](D) of this subdivision: seven hundred (700) ppmvd, corrected to fifteen percent (15%) oxygen.
- (3) **Non - Ozone Season Limit.** For a source subject to this section that is also a [NOx Budget Program source] CAIR NOx Ozone Season unit: 0.15 pounds per [MMBTU] MMBtu during the period from October 1 to April 30, inclusive.

[(4) In addition to complying with the emission limitation in subdivision (2)(B) of this subsection, by May 31, 1995 the owner or operator of any waste combustor which combusts refuse derived fuel shall install and operate selective noncatalytic reduction or other NOx emissions control technology capable of reducing the NOx emission rate by at least thirty percent (30%) from the average emission rate in calendar year 1990 on one boiler unit at such facility. If the Commissioner determines that operations during 1990 were not representative of normal

operations of the facility, the Commissioner may use another calendar period which is more representative. In addition, actual annual average NOx emissions from other boiler units at such facility shall each not exceed 420 tons per year. The Commissioner may consider, in the same manner as for other sources, any emission reduction below 0.38 pounds per MMBTU to be eligible as surplus emissions reductions for purposes of emission reduction credits pursuant to subsection (j) of this section until May 31, 1999.]

(4) The owner or operator of a premises or emission unit subject to this section shall demonstrate compliance with the emission limitations in this subsection in accordance with subsection (k) of this section.

(5) The owner or operator of a premises or emission unit subject to this section shall not demonstrate compliance with this section by averaging the rate of NOx emitted among emission units.

[TABLE 22-1]

TABLE 22-1 NOX EMISSION LIMITATION BY EMISSION UNIT	GAS-FIRED	RESIDUAL-OIL- FIRED	OTHER OIL- FIRED	COAL-FIRED
Gas Turbine engine[, with 100 MMBTU/hr or greater MRC] with a MRC of 25 MMBtu/hr or more	[55] 25 ppmvd at 15% excess oxygen	Not applicable	[75] 42 ppmvd at 15% excess oxygen	not applicable
[Turbine engine, with MRC less than 100 MMBTU/hr]	[0.90 lb/MMBTU]	[Not applicable]	[0.90 lb/MMBTU]	[not applicable]
Cyclone furnace	[0.43] 0.17 lb/MMBTU	[0.43] 0.17 lb/MMBTU	[0.43] 0.17 lb/MMBTU	[0.43] 0.17 lb/MMBTU
Fast-response double-furnace Naval boiler	[0.20] 0.17 lb/MMBTU	[0.30] 0.17 lb/MMBTU	[0.30] 0.17 lb/MMBTU	[0.30] 0.17 lb/MMBTU
Fluidized bed combustor	not applicable	Not applicable	not applicable	[0.29] 0.17 lb/MMBTU
[Other boilers] Boilers with a MRC of 5 MMBtu/hr or more but less than 50 MMBtu/hr	0.20 lb/MMBTU	0.25 lb/MMBTU	0.20 lb/MMBTU	[0.38] 0.30 lb/MMBTU
Boilers with a MRC of 50 MMBtu/hr or more but less than 250 MMBtu/hr	0.10 lb/MMBTU	0.20 lb/MMBTU	0.20 lb/MMBTU	0.20 lb/MMBTU
On or before December 31, 2011, boilers with a MRC of 250 MMBtu/hr or more	0.17 lb/MMBTU	0.17 lb/MMBTU	0.17 lb/MMBTU	0.17 lb/MMBTU
Reciprocating engine with a MRC of 3 MMBtu/hr or more	[2.5] 1.5 gm/bk hp-hr	Not applicable	[8] 2.3 gm/bk hp-hr	not applicable

(f) Multi-fuel sources.

[(1) When, pursuant to subdivision (d) (1) (B) of this section, the owner or operator of a stationary source switches the use of fuel, converts to a new fuel, or is capable of burning two or more different fuels, such owner or operator shall comply with the requirements of this subsection.]

[(2)] The owner or operator of a source that is capable of firing two or more fuels shall not cause or allow emissions of NOx from such source, in excess of [the following:]

[(A) For fuel-burning equipment that simultaneously fires two or more different fuels:] an emission limitation calculated by 1) multiplying the heat input of each fuel combusted by the emission limitation established in this section for such fuel, 2) summing those products, and 3) dividing the sum by the total heat input[; or].

[(B) For fuel-burning equipment that is capable of interchangeably firing two or more fuels: the emission limitation in Table 22-1 for the particular equipment and fuel used. Notwithstanding this requirement, the owner or operator of a source that operates exclusively on other oil or gas from May 1 through September 30 of any year and on another fuel during the remainder of the year shall not cause or allow emissions of NOx from such source in excess of 0.2 pounds per MMBTU from May 1 through September 30 and 0.29 pounds per MMBTU for the remainder of the year.]

[(3) The owner or operator of a source which, on or after January 1, 1990, converts the fuel used at such source, shall not cause or allow emissions of NOx from such source in excess of the following:

- (A) 0.29 pounds per MMBTU, when the source burned coal to provide more than fifty percent (50%) of its total heat input during the last full calendar year immediately prior to such conversion; or
- (B) 0.225 pounds per MMBTU, if the source burned residual oil to provide more than fifty percent (50%) of its total heat input during the last full calendar year immediately prior to such conversion.]

(g) Forty percent (40%) reduction. Repealed

[(1) When the owner or operator of a stationary source subject to this section reduces the NOx emission rate from such source by forty percent (40%), as provided in subdivision (d)(1)(C) of this section, such owner or operator shall comply with the emission limitations of this section established in a permit issued by the Commissioner. Such permit shall specify such source's NOx emission limitation to be the more restrictive of:

- (A) sixty percent (60%) of such source's emission rate at maximum capacity during calendar year 1990; or
- (B) sixty percent (60%) of the emission limitation applicable to the source on January 1, 1990.

Such permit shall express the NOx emission limitation in the same units of measurement as the NOx emission limitation that would otherwise apply to such source in subsection (e) of this section.

(2) To determine the actual emission rate specified in subdivision (1)(A) of this subsection, such owner or operator shall conduct an emission test at such source under operating conditions representative of those conditions in existence at the source in calendar year 1990, at the maximum capacity at which the source was operated during such calendar year.

(3) If the Commissioner determines that operations during calendar year 1990 were not representative of normal operations from such source, the Commissioner may use another calendar year which is more representative.]

(h) Reconstruction or replacement. [Repealed]**(i) Schedule modification.**

(1) If the owner or operator of a stationary source subject to this section proves to the satisfaction of the Commissioner or the commissioner's designee that it is not technologically or economically feasible for such source to comply with the emission limitations in [subsections] subsection (e) [through (g)] of this section, except the emission limitation in subsection (e)(3) of this section,

the Commissioner or the commissioner's designee may by permit or order require NOx emission reductions through modifications of the schedule of NOx-emitting activities and implementation of other measures to reduce NOx emissions at such source. Such permit or order may include restrictions on operations on any day for which the Commissioner or the commissioner's designee has forecast that ozone levels will be ["moderate to unhealthful," "unhealthful," or "very unhealthful." "moderate to unhealthy for sensitive groups", "unhealthy for sensitive groups", "unhealthy", or "very unhealthy".

- (2) This subsection shall only apply to the following:
- (A) Oil-fired turbine engines or fast-response double-furnace Naval boilers that generate power to create simulated high-altitude atmospheres for the testing of aircraft engines;
 - (B) Testing of fuel-burning equipment undergoing research and development; [or]
 - (C) Compression-ignition reciprocating engines used exclusively for the training personnel in the operation and maintenance of such engines aboard submarines[.]; or
 - (D) Mobile source engine test cells, test stands and aircraft engine test cells and test stands.
- (j) **[Emissions reduction trading] NOx Allowance Acquisition Program.**

(1) The owner or operator of a stationary source subject to subsection (e) of this [to this] section may use [NOx DERCs or] NOx allowances [or both]to the extent not otherwise restricted to comply with [the] each applicable emission limitation contained in subsection (e) of this section. [pursuant to a permit or order issued by the commissioner.]

(2) Such owner or operator shall retire [one (1) NOx DERC or] one (1) NOx allowance for each ton of NOx emitted in excess of the applicable emission limitation in subsection (e) of this section, as calculated pursuant to [a permit or order issued by the commissioner] this subsection. On and after January 1, 2012, the owner or operator shall retire two (2) NOx allowances

for each ton of NOx emitted in excess of the applicable emission limitation in subsection (e) of this section, as calculated pursuant to this subsection. Such owner or operator shall conduct an emission test or submit another method acceptable to the Commissioner or the commissioner's designee to estimate the NOx emitted in excess of such applicable emission limitation. Such emission test shall be conducted under operating conditions that demonstrate the maximum emission rate of such source. Such emission test shall be certified pursuant to subsection (k) of this section.

(3) Any [creation or] use of [DERCs or] NOx allowances for the purpose of this subsection shall be consistent with the provisions of [40 CFR 51, Subpart U and the U. S. Environmental Protection Agency's "Emissions Trading Policy Statement," published December 4, 1986 (Federal Register, Volume 51, page 43814)]. The use of NOx allowances pursuant to this subsection shall also be consistent with the provisions of section 22a-174-22a(f)(4)] this subsection and section 22a-174-22c of the Regulations of Connecticut State Agencies.

[(4) Vintage restrictions. For the purposes of this section, the following vintage restrictions shall apply:

- (A) Any DERC shall be used for the purpose of compliance with this section within five (5) calendar years from the year of generation; and
- (B) Any NO_x allowance allocated to, or otherwise acquired by, the owner or operator of a stationary source subject to this section, if used for the purpose of compliance with this section, shall be used within five (5) calendar years from the year of initial allocation.]

(4) For inclusion in the NOx allowance acquisition program, an owner or operator of a subject source shall submit as part of their compliance plan submission under subsection (m) of this section, a NOx allowance acquisition protocol, to the Commissioner or the commissioner's designee for review and written approval. The protocol shall include, at a minimum:

- (A) A formal request to participate in the NOx allowance acquisition program;
- (B) Identification of all stationary sources intended to participate in the NOx allowance acquisition program

and specifying which of those are peaking units.

- (C) A detailed methodology for determining and recording heat input monthly or daily as applicable to CEM;
- (D) All calculations, using the applicable formula provided in subdivision (7) of this subsection, of the number of NOx allowances used. Calculations shall specify unit specific values for NOx limits;
- (E) A proposed FLER, applicable to sources without continuous emission monitoring; and
- (F) A NOx control strategy evaluation submitted in accordance with subsection (m) of this section that demonstrates that no reasonable control option or means of modifying such emission unit would enable such emission unit to achieve the applicable NOx limit in subsection (e) of this section is available.

(5) The Commissioner or the commissioner's designee shall not approve a NOx allowance acquisition protocol for an emission unit unless they are satisfied that the owner or operator has demonstrated in the NOx control strategy evaluation submitted in accordance with subsection (m) of this section that the subject emission unit cannot meet the applicable emission limit set forth in subsection (e) of this section utilizing any technologically and economically feasible control option or other technologically and economically feasible means of modifying the emission unit.

(6) In the event that a determination of insufficiency is made by the Commissioner or the commissioner's designee concerning the NOx allowance acquisition protocol for a specified emission unit, the owner or operator shall comply with the applicable NOx emission limit in subsection (e) of this section.

(7) NOx Allowance Use. The owner or operator of each subject stationary source participating in the NOx allowance acquisition program shall use the following methodology to determine on a monthly basis the quantity of NOx allowances used. No later than the twentieth day of each month, the owner or operator shall calculate as follows, and permanently retire sufficient number of NOx allowances used in the preceding calendar month for the subject stationary source, and as applicable, using the full load emission rate or continuous emission monitoring approved in writing by the Commissioner or

the commissioner's designee:

- (A) Actual NOx allowances (tons) used = (Actual heat input in MMBtu/month) X (FLER - 0.95 x Allowable emission limit in lbs/MMBtu) / (2000 lbs/ton);
- (B) Actual NOx allowances (tons) used = (Actual heat input in MMBtu/month) X (FLER - 0.95 x Allowable emission limit in grams/hp hr) X (2.5 lbs/MMBtu) / (grams/ hp hr) / (2000 lbs/ton);
- (C) Actual NOx allowances (tons) used = (hrs/month) X (FLER - 0.95 x Allowable emission limit in grams/hp hr) X (hp rating) / (454 grams/ lb) / (2000 lbs/ton);
OR
- (D) Actual NOx allowances (tons) used = (Actual heat input in MMBtu/day) X ((24-hour average actual CEM*-recorded NOx emission rate) - (0.95) x Allowable emission limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f) (2) (A) of the Regulations in lbs/MMBtu)) / (2000 lbs/ton).

* This rate shall be calculated pursuant to the methodology described in 40 CFR 75. The rate shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR 75.

(8) Peaking Unit. The owner or operator of each subject peaking unit shall multiply the total actual tons of excess NOx emitted from such emission unit by seven (7) and then rounded to the next greater whole ton, to determine the number of NOx allowances to be permanently retired, on any day for which the Commissioner or the commissioner's designee had forecasted that ozone levels would be "moderate to unhealthy for sensitive groups", "unhealthy for sensitive groups", "unhealthy", or "very unhealthy". On and after January 1, 2012, the owner or operator of each subject peaking unit shall multiply the total actual tons of excess NOx emitted from such stationary source by fourteen (14) and then rounded to the next greater whole ton, to determine the number of NOx allowances to be permanently retired, on any day for which the Commissioner or the commissioner's designee had forecasted that ozone levels would be "moderate to unhealthy for sensitive groups", "unhealthy for sensitive groups", "unhealthy", or "very unhealthy". No later than the twentieth day of October, the owner or operator shall make such calculation and permanently

retire a sufficient number of NOx allowances used in the preceding ozone season for the subject stationary source.

(9) NOx Allowance Tripling. If sufficient NOx allowances are not in the owner or operator's possession prior to the 20th day of the following calendar month for the preceding calendar month NOx allowances usage; then at a minimum, the owner or operator in noncompliance shall make restitution by permanently retiring the number of NOx allowances equal to the quantity of emissions ("true up") caused by the exceedance plus a 200% premium in NOx allowances. However, based on the gravity of the noncompliance, the Commissioner or the commissioner's designee may require additional upward adjustment.

(10) Allowance Use. Pursuant to subsection (d) (3) of this section, the owner or operator may use NOx allowances pursuant to subsection (j) of this section to achieve all or a portion of the reductions required by this section.

- (A) In order for the owner or operator to use NOx allowances, such owner or operator shall create a general account in EPA's CAIR NOx Ozone Allowance Tracking System ("CAIR NATS") and a general account in EPA's CAIR Annual NOx Allowance Tracking System;
- (B) Each NOx allowance used for compliance with this section shall be considered used for compliance with this section when they are transferred from the facility's account in the CAIR NATS to the CT State NOx Retirement Account; and
- (C) Each NOx allowance used for compliance with this section for excess emissions during the ozone season must be a NOx ozone season allowance.

(11) FLER Use and Exceedance. If applicable, the owner or operator shall comply with the FLER approved by the Commissioner or the commissioner's designee. The owner or operator in noncompliance with an established FLER shall make restitution by permanently retiring the number of NOx allowances equal to the quantity of emissions ("true up") caused by the exceedance plus a 200% premium in NOx allowances. If the period of noncompliance is not known, the time period from the completion of the last Department-witnessed emission test through the date the FLER compliance is achieved as approved by the Commissioner or the commissioner's designee shall be used.

(12) Reserved.

(13) FLER Modification. FLERs may be modified only after being approved in writing by the Commissioner or the commissioner's designee.

(14) Make and Keep Records. Such owner or operator shall make and keep records in accordance with subsection (l) of this section.

(15) Submit Reports. No later than March 1 of every year, the owner or operator shall submit a report to the Commissioner or the commissioner's designee as required in accordance with subsection (l)(6) of this section.

(16) Certification of documents. Any document, including, but not limited to any NOx allowance acquisition protocol, which is required to, be submitted to the Commissioner or the commissioner's designee under this subsection shall be certified in writing in accordance with subsection (m)(2) of this section.

(17) Reserved.

(18) No Creation of Property Rights. This subsection does not create any property rights with respect to NOx allowances.

(k) Emissions testing and monitoring.

(1) The owner or operator of any source subject to an emission limitation under this section shall conduct an emission test to demonstrate compliance with this section no later than one year after becoming subject to this section. Each such emission test shall be conducted in accordance with section 22a-174-5 of the Regulations of Connecticut State Agencies. Compliance with the emission limitations of this section shall be determined based on the average of three (3) one-hour tests, each performed over a consecutive 60-minute period and performed in accordance with section 22a-174-5 of the Regulations of Connecticut State Agencies. Any analysis of nitrogen content conducted as part of such emission testing shall be in accordance with Method D-3228 of the American Society for the Testing of Materials. If the commissioner or the commissioner's designee determines that three (3) one-hour tests are not

reasonable given the location, configuration or operating conditions of a stationary source, the commissioner or the commissioner's designee may approve testing where compliance with the emission limitations of this section shall be determined based on the average of four (4) fifteen-minute tests, each performed over a consecutive fifteen-minute period.

Any owner or operator of a stationary source who has not installed and operated a continuous emissions monitor at such source shall conduct emission testing once every five years from the date of the previous test or five years from the date the previous test was due, whichever is earlier.

(2) The owner or operator shall demonstrate compliance with emission limitations of this section using sampling and analytical procedures approved under 40 CFR 60, Appendix A, or under procedures in section 22a-174-5(d) of the Regulations of Connecticut State Agencies. Sampling shall be conducted when the source is at normal operating temperature and, unless allowed otherwise by the Commissioner or the commissioner's designee in a permit or order, is operating at or above ninety percent (90%) of maximum rated capacity for a fuel-burning source or a process source, or at or above ninety percent (90%) of design capacity for a waste combustor. Notwithstanding the foregoing requirements of this subdivision:

(A) If the commissioner or the commissioner's designee determines that operating at or above ninety percent (90%) of maximum capacity for a fuel burning source or a process source during sampling is not reasonable given the location, configuration or operating conditions of a source, the commissioner or the commissioner's designee may approve testing of a fuel burning source or process source at an alternative maximum capacity where compliance with the emission limitations of this section shall be determined based on operating at or above ninety percent (90%) of the alternative maximum capacity approved by the commissioner or the commissioner's designee; and

(B) Any source that has operated in excess of one hundred percent (100%) of its maximum capacity at any time since May 31, 1995 shall be tested when the source is operating at or above ninety percent (90%) of its highest operating rate since May 31, 1995.

(3) On and after May 31, 1995, the owner or operator of any source that emitted more than one hundred (100) tons of NOx

from a single stack during any calendar year beginning January 1, 1990, shall install, calibrate, maintain, operate and certify a continuous emissions monitor for NOx for each such stack. The owner or operator shall notify the Commissioner or the commissioner's designee in writing at least thirty (30) days prior to conducting any performance or quality assurance testing of any such monitor. Any such testing shall be conducted in accordance with a testing protocol approved by the Commissioner or the commissioner's designee. Any continuous emission monitor for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in 40 CFR 60, Subpart A, Appendix B and Appendix F.

(4) Unless otherwise specified by the Commissioner or the commissioner's designee in a permit or order, the averaging times for the following emission limitations shall be applicable to a source that has or is required to have a continuous emissions monitor for NOx:

- (A) For the emissions limitation [is] in subsection (e)(3), the period from October 1 to April 30, inclusive, including startup, shutdown[,] and malfunction; and
- (B) For any other emission limitation contained in this section, twenty-four (24) hours, measured from midnight at the beginning of any day to midnight of the end of that day, including all periods of operation, including startup, shutdown and malfunction.

(1) Reporting and record keeping.

(1) The owner or operator of a stationary source subject to this section, shall make and keep the following records:

- (A) For an emergency engine, daily records of operating hours of such engine, identifying the operating hours of emergency and non-emergency use, and identifying if such emergency engine operated on any day for which the Commissioner or the commissioner's designee had forecasted that ozone levels would be "moderate to unhealthy for sensitive groups", "unhealthy for sensitive groups", "unhealthy", or "very unhealthy";

- (B) For [any premises] each emission unit [for which subdivision] subject to this section pursuant to subsection (b) (2) (B) [or (b) (3)] of this section [applies], records, [(e.g.) including, but not limited to, fuel use, continuous emissions monitoring, and operating hours[]] to [determine] verify that subsection (b) (2) (A) of this section is not applicable [whether the NOx emissions from such premises on any day from May 1 through September 30, inclusive, are in excess of one hundred thirty-seven (137) pounds for a premises located in a severe nonattainment area for ozone or two hundred seventy-four (274) pounds for a premises located in a serious nonattainment area for ozone.];
- (C) For each premises subject to this section pursuant to subsection (b) (1) (B) of this section, [Monthly] monthly and annual records, [(e.g.) including, but not limited to, fuel use, continuous emissions monitoring, and operating hours []] to [determine] verify that subsection (b) (1) (A) of this section is not applicable [whether NOx emissions from such premises in any calendar year are in excess of twenty-five (25) tons for a premises located in a severe nonattainment area for ozone or fifty (50) tons for a premises located in a serious nonattainment area for ozone];
- (D) Records, including costs of parts and labor, of all tune-ups, repairs, replacement of parts and other maintenance;
- (E) Copies of all documents submitted to the Commissioner or the commissioner's designee pursuant to this section;
- (F) For the owner or operator of any [source] emission unit required to install, calibrate, and operate a continuous emissions monitor for NOx under [subdivision] subsection (k) (3) of this section, all charts, electronically stored data, and printed records produced by such continuous emissions monitor;
- (G) Procedures for calculating NOx emission rates in subparagraphs (B) and (C) [above] of this subdivision;

- (H) Records of the dates, times, and places of all emission testing required by this section, the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of such testing;
- (I) For the owner or operator of any [source] emission unit required to install, calibrate, and operate a continuous emissions monitor for NOx under [subdivision] subsection (k) (3) of this section, records of all performance evaluations, calibration checks and adjustments on such monitor; a record of maintenance procedures; and all data necessary to complete the quarterly reports required under [subdivision] subsection (l) (4) of this section; [and]
- (J) Any other records or reports to demonstrate compliance with this section required by an order or permit issued by the Commissioner or the commissioner's designee [pursuant to this section.]; and
- (K) For each emission unit each record required by subsection (n) of this section.
- (2) [Within] Not more than thirty (30) days [of] after the completion of emission tests conducted under the requirements of [subdivision] subsection (k) (1) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner or the commissioner's designee.
- (3) [Within] Not more than sixty (60) days [of] after certification tests conducted under the requirements of [subdivision] subsection (k) (3) of this section, the owner or operator of such source shall submit a written report of the results of such testing to the Commissioner or the commissioner's designee.
- (4) The owner or operator of any source required to be equipped with a continuous emissions monitor for NOx under [subdivision] subsection (k) (3) of this section shall submit to the Commissioner or the commissioner's designee written quarterly reports of excess emissions and CEM malfunctions. Such reports shall be submitted to the Commissioner or the

commissioner's designee on or before January 30, April 30, July 30, and October 30 and shall include data for the three calendar month period ending the month before the due date of the report. For each period of excess emissions, such report shall include the date and time of commencement and completion of such period, the magnitude and suspected cause of the excess emissions and all actions taken to correct the excess emissions. For each malfunction of the CEM system, such report shall include the date and time of when the malfunction commenced and ended, and all actions taken to correct the malfunction.

(5) The owner or operator of any source subject to this section shall retain all records and reports produced pursuant to the requirements of this section for five (5) years. Such records and reports shall be available for inspection at reasonable hours by the Commissioner or the commissioner's designee, or the Administrator. Such records and reports shall be retained at the source, unless the commissioner or the commissioner's designee approves in writing the use of another location in the State.

(6) Annual Report. On or before [April 15] March 1st of each year, the owner or operator [of any source subject to this section] shall submit a report on NOx emissions from such source, on a form provided by the Commissioner or the commissioner's designee [.] for any source subject to this section in accordance with subsection (b) (1) (A), (b) (2) (A) or (b) (2) (C) of this section.

(7) The Commissioner or the commissioner's designee [may] must use data recorded by continuous emissions monitors for NOx, if applicable, and any other records and reports to determine compliance with applicable requirements of this section.

(8) Notwithstanding the requirements of this section, the owner and operator of any premises subject to this section pursuant to subdivision (b) (1) (B) of this section is exempt from the record keeping and reporting requirements in subdivisions (1) (B), (1) (F), (1) (G), (1) (H), (1) (I), (2), (3) and (4) of this subsection.

(9) Notwithstanding the requirements of this section, the owner and operator of any emission unit subject to this section pursuant to subsection (b) (2) (B) of this section is exempt from the record keeping and reporting requirements in subdivision (1) (C), (F), (G), (H) and (I) and subdivisions (2), (3) and (4) of

this subsection.

(10) Notwithstanding the requirements of this section, the owner and operator of any emission unit subject to this section pursuant to subsection (b) (2) (D) of this section is exempt from the record keeping and reporting requirements in subdivisions (1) (B), (1) (C), (1) (G), (2), (3) and (4) of this subsection.

(11) Certification of Reports. Any document, including, but not limited to, any report, which is required to be submitted to the Commissioner or the Commissioner's designee under this subsection shall be certified in writing in accordance with subsection (m) (2) of this section.

(m) Compliance plans.

(1) The owner or operator of any new or existing source that is subject to this section in accordance with subsection (b) (1) (A), (b) (2) (A) or (b) (2) (C) of this section shall submit a compliance plan to the Commissioner or the Commissioner's designee within ninety days (90) days of receipt of notice from the Commissioner or the Commissioner's designee that such plan is required or by [September 1, 1994,] October 1, 2009, whichever is earlier, on forms provided by the Commissioner or the commissioner's designee. Such compliance plan shall document how the owner or operator of the subject source will comply with all applicable requirements of this section. The owner or operator of any source [which] that becomes subject to this section after [May 1, 1994] May 1, 2009, shall submit a compliance plan [within] not more than four (4) months [of] after the date on which the source becomes subject to this section.

(2) Any compliance plan submitted pursuant to this subsection shall include a certification signed by a responsible corporate officer or a duly authorized representative of such officer, as those terms are defined in subdivision 22a-430-3(b) (2) of the RCSA, and by the individual delegated by such officer with the responsibility of actually preparing the compliance plan. Such certification shall read as follows: "I have personally examined and am familiar with the information submitted in this [compliance plan] document and all attachments thereto. Based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, I certify that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand

that any false statement made in this [compliance plan] document or its attachments may be punishable as a criminal offense under 22a-175 of the Connecticut General Statutes, and in accordance with any other applicable [statute] law."

(3) If a compliance plan does not contain all measures necessary to comply with all requirements of this section, the Commissioner or the commissioner's designee may notify the owner or operator of such source of the deficiency. Such owner or operator shall resubmit a revised compliance plan [within] not more than thirty (30) days [of] after receipt of such notice.

(4) [Notwithstanding the provisions of subdivision (1) of this section, the owner or operator of a NOx Budget Program source who is subject to a revised emission standard shall not be required to submit a revised compliance plan unless the commissioner requests so in writing.] The owner or operator of an emission unit subject to subdivision (1) of this subsection unable to meet the limitations in subsection (e) of this section, shall submit the applicable NOx control strategy evaluation required under subdivisions (5) and (6) of this subsection as part of the compliance plan submitted under this subsection. The owner or operator of an emission unit subject to this section intending to comply with subsection (e) of this section through the use of a NOx allowance acquisition shall submit a NOx allowance acquisition protocol required under subdivision (7) of this subsection as part of the compliance plan submitted under this subsection.

(5) Control Strategy Evaluation. The owner or operator of an emission unit subject to subdivision (1) of this subsection, as part of their compliance plan to meet the limitations in subsection (e) of this section, shall submit a NOx control strategy evaluation in writing to the Commissioner or the commissioner's designee for review and written approval for each of the following emission units that are unable to meet the limitations in subsection (e) of this section:

- (A) Gas turbine engine with a maximum rated capacity of 25 MMBtu/hr or more;
- (B) Cyclone Furnace;
- (C) Naval Boiler;

- (D) Boiler with a maximum rated capacity of 5 MMBtu/hr or more; or
- (E) Reciprocating engine with a maximum rated capacity of 3 MMBtu/hr or more.

(6) This analysis shall include, but not be limited to, evaluation of each of the following applicable NOx control strategies for the subject emission unit:

- (A) low-NOx burners;
- (B) overfire air;
- (C) flue gas recirculation;
- (D) natural gas reburn;
- (E) burners out of service;
- (F) selective catalytic reduction;
- (G) selective non-catalytic reduction;
- (H) non-selective catalytic reduction;
- (I) three way catalyst;
- (J) water injection;
- (K) dry low-NOx;
- (L) use of alternative fuels; and
- (M) retarded ignition timing.

(7) The owner or operator of a stationary source subject to subsection (e) of this section, unable to meet the limitations in subsection (e) of this section and after conducting the applicable evaluation in subdivisions (5) and (6) of this subsection that is approved by the commissioner or the commissioner's designee, may participate in the NOx allowance acquisition program described in subsection (j) of this section on and after May 1, 2009. For inclusion in the NOx allowance acquisition program, an owner or operator of a subject source shall submit as part of their compliance plan, a NOx allowance

acquisition protocol in accordance with subsection (j) of this section, to the Commissioner or the commissioner's designee for review and written approval.

(n) Source Maintenance and Inspection.

(1) Boiler. The owner or operator of each boiler subject to requirements of this section shall create a schedule to perform maintenance and inspection and conduct such maintenance and inspection, including the following:

(A) Perform an efficiency test;

(B) Adjust the combustion process of the boiler in accordance with the procedures specified in Chapter 5, Combustion Efficiency Tables, Taplin, Harry, R., Fairmont Press, 1991;

(C) Measure the concentration of NO_x, CO, and oxygen in the effluent/exhaust stream before and after the combustion process of the boiler has been adjusted using the procedures in subparagraph (B) of this subdivision including:

(i) All analyzers meeting the specifications set forth in the applicable sections of 40 CFR 60, Appendix B, Performance Specifications 2 through 4; and

(ii) Portable extractive monitors using an electrochemical sensor performing the gas concentration measurement.

(D) Measure the opacity of the effluent/exhaust stream before and after the combustion process of the boiler has been adjusted, using the procedures in subparagraph (B) of this subdivision, using;

(i) 40 CFR 60, Appendix A-4, Method 9, Visual Determination Of The Opacity Of Emissions From Stationary Sources; or

(ii) 40 CFR 60, Appendix A-7, Method 22, Visual Determination Of Fugitive Emissions From Material Sources and Smoke Emissions From Flares;

- (E) Determine the hours of operation for the boiler for the previous twelve month period on a monthly basis;
- (F) Annually, before April 1st of each year, inspect and maintain such source in accordance with such schedule;
- (G) Make and keep records of the dates of each inspection and maintenance activity required to be conducted in accordance with subparagraph (B) of this subdivision, the operating conditions at the time of the inspection and maintenance, and the results of such inspection and maintenance, including, but not limited to, the following:
 - (i) The concentration of NO_x, CO, and oxygen in effluent/exhaust stream;
 - (ii) The opacity of the effluent/exhaust stream;
 - (iii) The names, titles and affiliation of the persons conducting each inspection and maintenance activity;
 - (iv) The NO_x emission concentration, in ppmvd as measured after the adjustment is made;
 - (v) The CO emission concentration, in ppmvd as measured after the adjustment is made;
 - (vi) The oxygen concentration, in percent by volume dry as measured after the adjustment is made; and
 - (vii) The opacity reading of the effluent/exhaust stream, as measured after the adjustment is made.

(2) Gas Turbine Engine. The owner or operator of each gas turbine engine subject to requirements of this section shall create a schedule to perform maintenance and inspection and conduct such maintenance and inspection, including the following:

- (A) Inspect the burner, the flame pattern from the burner, and the systems which control the air-to-fuel

ratio;

- (B) Adjust the air-to-fuel ratio in accordance with the results of the inspections performed;
- (C) Measure the NOx, CO and oxygen in the effluent/exhaust stream before and after the combustion process of the turbine has been adjusted;
- (D) Measure the opacity of the effluent/exhaust stream before and after the air-to-fuel ratio has been adjusted;
- (E) Re-adjust the air-to-fuel ratio based on results of the previous adjustment performed to minimize total NOx emissions;
- (F) Make and keep records, including, but not limited to, the following:
 - (i) The date on which the gas turbine engine is adjusted;
 - (ii) The name, title and affiliation of the person who made the adjustments;
 - (iii) The NOx emission concentration, in ppmvd, as measured after the adjustments are made;
 - (iv) The CO emission concentration, in ppmvd, as measured after the adjustments are made;
 - (v) The oxygen concentration, in percent by volume dry basis, as measured after the adjustments are made; and
 - (vi) The opacity of the effluent/exhaust stream, as measured after the adjustments are made;
- (G) Install, operate, and maintain an elapsed time meter for each gas turbine engine to indicate, in cumulative hours, the elapsed turbine operating time for the previous twelve months;
- (H) Determine the hours of operation for each gas turbine engine for the previous twelve month period on a monthly basis; and

(I) Annually, before April 1st of each year, inspect and maintain such source in accordance with such schedule.

(3) Reciprocating Engine. The owner or operator of each reciprocating engine subject to requirements of this section shall create a schedule to perform maintenance and inspection and conduct such maintenance and inspection, including the following:

- (A) Set and maintain at all times the ignition and injection timing of the engine four degrees retarded relative to standard timing, if applicable;
- (B) The CO emission concentration shall not increase beyond 100 ppmvd, corrected to 15% oxygen;
- (C) The turbocharger speed shall not be increased beyond the maximum operating speed recommended by the manufacturer;
- (D) The exhaust port temperature shall not be increased beyond the manufacturer's recommended maximum operating temperature;
- (E) The opacity of the emissions from the engine shall not be equal to or greater than twenty percent (20%) opacity;
- (F) Notwithstanding subparagraph (A) of this subdivision, the engine shall be able to start-up fast enough to comply with emergency start-up health care facility requirements, if applicable;
- (G) Inspect and adjust the ignition and injection timing of the reciprocating engine at least once every three (3) years;
- (H) Make and keep records, including, but not limited to, the following:
 - (i) The date on which the ignition and injection timing of the reciprocating engine is adjusted; and
 - (ii) The name, title and affiliation of the person

who made the adjustments;

- (I) Install, operate, and maintain an elapsed time meter for each reciprocating engine to indicate, in cumulative hours, the elapsed engine operating time for the previous twelve (12) months;
- (J) Determine the hours of operation for each reciprocating engine for the previous twelve (12) month period on a monthly basis; and
- (K) Annually, before April 1st of each year, inspect and maintain such source in accordance with such schedule.

(4) Any owner or operator of a stationary source who has not installed and operated a continuous emissions monitor at such source to measure the subject emission concentrations shall conduct emission testing once a year, or as required in the inspection and maintenance schedule, whichever is more frequent.

(o) Fuel Emergencies.

(1) The commissioner or the commissioner's designee may suspend the requirements of subsections (d), (e), (g) and (i) of this section for the owner or operator of any affected unit. Such suspension shall be made only when the commissioner or the commissioner's designee finds that the availability of fuel that complies with such requirements is inadequate to meet the needs of residential, commercial and industrial users in this state and that such inadequate supply constitutes an emergency.

(2) The commissioner or the commissioner's designee shall specify in writing the period of time for which the suspension described in subdivision (1) of this subsection shall be in effect.

(3) No later than thirty days after the termination of any suspension of limits made pursuant to this subsection, the owner or operator of an affected unit or units shall report to the commissioner or the commissioner's designee in writing the amount of NOx emissions in excess of those that would have occurred had the use of compliant fuel at the affected source not been interrupted. The commissioner or the commissioner's designee may require that the owner or operator of such

affected unit or units offset such NOx emissions through the use and permanent retirement of a quantity of allowances calculated in accordance with the provisions of subsection (j) of this section.

Statement of Purpose:

The reason for this amendment to Section 22a-174-22 of the RCSA control of nitrogen oxides emissions is:

- To clarify the applicability of the section in subsection (b);
- To streamline the subsections (d) and (e) and to bring the emission limitations into line with available control technology requirements for boilers, turbines and engines;
- To limit trading to allowance acquisition after May 1, 2009 in subsection (j) to 1:1 and 7:1 for peaking units;
- Increase allowance use required to offset excess emissions on and after January 1, 2012 in subsection (j) to 2:1 and 14:1 for peaking units;
- To add subsection (n) to require source inspection and maintenance;
- To address fuel emergencies by adding section (o);
- To eliminate obsolete language and revise the format of certain internal references to match current Department usage.