Section 22a-174-22e. Control of nitrogen oxides emissions from fuel-burning equipment at major stationary sources of nitrogen oxides.

(a) Definitions.

"Affected unit" means a fossil-fuel fired:

(A) Stationary source that serves a generator with a nameplate capacity of 15 MW or more; or

(B) Boiler or indirect heat exchanger with a maximum heat input capacity of 250 MMBtu/hr or more.

"Boiler serving an electric generating unit" or "boiler serving an EGU" means a steam generating unit used for generating electricity, including a combined heat and power unit.

"Combined cycle combustion turbine" means a combustion turbine that recovers heat from the turbine exhaust gases to heat water or generate steam, including a combined heat and power unit.

"Combined heat and power", also known as ''cogeneration,'' means a steam-generating unit that simultaneously produces both electric (and mechanical) and useful thermal energy from the same primary energy source.

"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, including a combined heat and power unit.

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

"Daily block average" means the arithmetic mean of all hourly emission concentrations or rates recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight).

"Digester gas" means a mixture of primarily methane and carbon dioxide produced by a bacterial degradation of organic matter under anaerobic conditions and used as a fuel.

"Duct burner" means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

"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.

"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.

"Emergency" means an unforeseeable condition that is beyond the control of the owner or operator of an emergency engine that:

(A) Results in an interruption of electrical power from the electricity supplier to the premises;

(B) Results in a deviation of voltage from the electricity supplier to the premises of three percent (3%) above or five percent (5%) below standard voltage in accordance with section 16-11-114 of the RCSA;

(C) Requires an interruption of electrical power from the electricity supplier to the 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) 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 in accordance with Action 6 of the ISO New England Operating Procedure No. 4 – Action During a Capacity Deficiency, effective August 12, 2014, or subsequent revisions thereto.

"Emergency engine" means a stationary reciprocating engine or a combustion turbine engine that is used as a means of providing mechanical or electrical power only during the following periods:

(A) During an emergency;

(B) Periods of testing;

(C) Periods of scheduled maintenance;

(D) When the facility owner or operator interrupts power to the facility to perform construction, maintenance or repair of the primary power distribution system at the facility; or

(E) When the electricity supplier makes a scheduled interruption of power to the facility so that the electricity supplier may perform construction, maintenance or repair of the primary power distribution system for the facility.

"Existing emission unit" means a source for which construction commenced prior to the effective date of this section.

"Gas" or "gaseous fuel" means natural gas, propane, or any other fuel that is in the gaseous state under standard conditions, except for landfill gas or digester gas.

"Industrial/commercial/institutional boiler" or "ICI boiler" means an indirect heat exchanger that heats water to supply heat to an industrial, commercial, or institutional operation. This term does not include boilers that serve electric generating units, but does include combined heat and power units.

"Landfill gas" means a mixture of primarily methane and carbon dioxide produced by bacterial degradation of organic matter in a landfill and used as a fuel.

"Non-ozone season" means the period beginning October 1 of a calendar year and ending on April 30 of the following calendar year, inclusive.

"Other oil" means a fuel that is liquid at standard conditions and is not residual oil.

"Ozone forecast" means the eight-hour ozone forecast issued as an air quality index one or more days in advance by the commissioner and posted on the Department's website or otherwise provided by the Department for the regulated community.

"Ozone season" means the period beginning May 1 of a calendar year and ending on September 30 of the same year, inclusive.

"Phase 1" means the first implementation phase of this section, beginning June 1, 2018 and ending May 31, 2022.

"Phase 2" means the second implementation phase of this section, beginning June 1, 2022 and continuing thereafter.

"Reciprocating engine" means an internal combustion engine in which a rotating crankshaft is driven by reciprocating motion of piston or pistons, including a combined heat and power unit.

"Relative accuracy test audit" or "RATA" means the CEMS performance test procedure conducted pursuant to 40 CFR Part 60 or 75.

"RCSA" means Regulations of Connecticut State Agencies.

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

"Temporary unit" means any gaseous or liquid fuel fired unit that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids,

carrying handles, dollies, trailers or platforms. A unit is not temporary if any one of the following conditions exists:

(A) The unit is attached to a foundation;

(B) The unit or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months. A temporary unit that replaces a temporary unit at a location and performs the same or similar function will be included in calculating the consecutive time period;

(C) The unit is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least two years and operates at that facility for at least three months of the year; or

(D) The unit is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam or hot water system in an attempt to circumvent the residence time specification of this definition.

"Test stand" or "test cell" means the collection of all equipment and activities associated with the apparatus used for testing uninstalled engines.

"Tune-up" means adjustments made to an emission unit to improve efficiency with respect to combustion operations.

"Uninstalled engine" means an engine not installed in, or an integrated part of, the final product.

(b) Applicability. This section applies to the owner or operator of the listed emission units, including temporary units, located at a major stationary source for NOx:

(1) A boiler serving an electric generating unit;

(2) A simple cycle combustion turbine with a maximum rated capacity of five MMBtu/hr or more;

(3) A combined cycle combustion turbine with a maximum rated capacity of five MMBtu/hr or more;

(4) An ICI boiler with a maximum rated capacity of five MMBtu/hr or more;

(5) A reciprocating engine with a maximum rated capacity of three MMBtu/hr or more;

(6) Equipment that combusts fuel for heating materials, including air, and that has a maximum rated capacity of five MMBtu/hr or more; or

(7) Any other stationary fuel-burning equipment with a maximum rated capacity of five MMBtu/hr or more.

(c) Exemptions and exceptions.

(1) The requirements of this section shall not apply to a mobile source.

(2) The requirements of this section shall not apply to an incineration unit subject to an emissions guideline issued under Section 129 of the Act.

(3) The requirements of subsections (d)(6), (d)(13), (i), (*l*), and (m) of this section shall not apply to the following reciprocating engines:

(A) Used to test or provide emergency power or alternative power for safety-related structures, systems and components or other Nuclear Regulatory Commission-mandated systems at an electric generating facility licensed under 10 CFR 50; or

(B) Located at a hospital or other health care facility and used to meet standards of The Joint Commission or the National Fire Protection Association for emergency electrical power systems.

(4) The requirements of this section shall not apply to a reciprocating engine operated by an EAS Participant, as defined in 47 CFR 11.2, to meet the equipment operational readiness requirements of 47 CFR 11.35.

(5) Emergency engines are exempt from the following requirements of this section:

(A) The emissions limitations of subsection (d)(6);

(B) The tune-up requirements of subsection (i);

(C) The testing requirements of subsection (*l*);

(D) The monitoring requirements of subsection (m); and

(E) If the emergency engine complies with the Tier 4 emissions standards of 40 CFR 1039, Subpart B for model year 2013 or later, such engine is exempt from the restriction of subsection (d)(13) of this section in addition to the exemptions provided in subparagraphs (A) through (D) of this subdivision.

(6) The requirements of subsections (d), (i), (*l*), and (m) of this section shall not apply to the owner or operator of a test stand or test cell, for emissions from the use of such test stand or test cell.

(7) The requirements of subsections (d)(3), (d)(4), (d)(6), (i), (*l*), and (m) of this section shall not apply to the emission units listed in subparagraphs (A) and (B) of this subdivision. The owner or operator of an emission unit operating pursuant to this subdivision shall not operate such emission unit on any day for which the Commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups," "unhealthy for sensitive groups," "unhealthy" or "very unhealthy."

Emission units that may operate pursuant to this exemption include the following:

(A) Fuel-burning equipment that is the subject of research and development; or

(B) Compression-ignition reciprocating engines used exclusively for training personnel in the operation and maintenance of such engines aboard submarines.

(8) The requirements of subsections (d)(3), (i), (*l*), and (m) of this section shall not apply to a boiler that operates to supply steam used for the startup of a nuclear reactor or to supply hot water, heat or steam for the protection of facility systems when reactor-heated steam is not available at an electric generating facility licensed under 10 CFR 50.

(9) The requirements of this section shall not apply to non-road engines, as defined in 40 CFR 89.2.

(d) Emissions limitations.

(1) The owner or operator of an emission unit shall not emit NOx in excess of the applicable emissions limitations specified in this subsection. The owner or operator of an emission unit shall comply with the applicable emissions limitations of this subsection or the owner or operator shall take one of the following actions:

(A) Implement an alternative compliance mechanism as provided in subsection (g) of this section;

(B) Operate under a case-by-case RACT determination as provided in subsection (h) of this section; or

(C) Cease operations as provided in subsection (f) of this section.

(2) **Boilers serving EGUs**.

(A) For Phase 1, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a boiler serving an EGU:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)	Coal-fired (lb/MMBtu)
Cyclone boiler	0.43	0.43	0.43	0.43
Other boiler	0.20	0.25	0.20	0.38

(B) For Phase 1, the following ozone season and non-ozone season emissions limitations apply to the owner or operator of a boiler serving an EGU that is also

an affected unit. The averaging period for the ozone season limit is May 1 through September 30, and the averaging period for the non-ozone season limit is October 1 through April 30:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)	Coal-fired (lb/MMBtu)
Ozone season limit (5 month average)	0.10	0.20	0.10	0.15
Non-ozone season limit (7 month average)	0.15	0.15	0.15	0.15

(C) For Phase 2, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a boiler serving an EGU:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)	Coal-fired (lb/MMBtu)
Boiler serving an EGU	0.10	0.20	0.10	0.12

(D) For Phase 2, the following non-ozone season emissions limitation applies to the owner or operator of a boiler serving an EGU that is also an affected unit. The averaging period for the non-ozone season limit is October 1 through April 30:

	Residual-oil-fired (lb/MMBtu)
Non-ozone season limit (7 month average)	0.15

(3) **ICI boilers.**

(A) For Phase 1, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of an ICI boiler:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)
Boilers with maximum rated capacity greater than or equal to 5 MMBtu/hr	0.20	0.25	0.20

(B) For Phase 1, the following ozone season and non-ozone season emissions limitations apply to the owner or operator of an ICI boiler that is also an affected unit. The averaging period for the ozone season limit is May 1 through

September 30, and the averaging period for the non-ozone season limit is October 1 through April 30:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)
Ozone season limit (5 month average)	0.10	0.20	0.15
Non-ozone season limit (7 month average)	0.15	0.15	0.15

(C) For Phase 2, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of an ICI boiler:

	Gas-fired (lb/MMBtu)	Residual-oil-fired (lb/MMBtu)	Other-oil-fired (lb/MMBtu)
Boilers with maximum rated capacity greater than or equal to 5 and less than 25 MMBtu/hr	0.20	0.25	0.20
Boilers with maximum rated capacity greater than or equal to 25 MMBtu/hr and less than 100 MMBtu/hr	0.05	0.20	0.10
Boilers with maximum rated capacity of 100 MMBtu/hr or greater	0.10	0.20	0.15

(D) For Phase 2, the following non-ozone season emissions limitation applies to an ICI boiler that is also an affected unit. The averaging period for the non-ozone season limit is October 1 through April 30:

	Residual-oil-fired (lb/MMBtu)
Non-ozone season limit (7 month average)	0.15

(4) **Simple cycle combustion turbines.**

(A) For Phase 1, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a simple cycle combustion turbine:

	Gas-fired	Other-oil-fired
Simple cycle combustion turbine	55 ppmvd	75 ppmvd

(B) For Phase 1, the following ozone season and non-ozone season emissions limitations apply to the owner or operator of a simple cycle combustion turbine that is also an affected unit. The averaging period for the ozone season limit is May 1 through September 30, and the averaging period for the non-ozone season limit is October 1 through April 30:

	Gas-fired	Other-oil fired
Ozone season limit (5 month average)	50 ppmvd or 0.18 lb/MMBtu	50 ppmvd or 0.19 lb/MMBtu
Non-ozone season limit (7 month average)	0.15 lb/MMBtu	0.15 lb/MMBtu

(C) For Phase 2, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a simple cycle combustion turbine:

	Gas-fired	Other-oil fired
Simple cycle combustion turbine	40 ppmvd	50 ppmvd

(D) For Phase 2, the following non-ozone season emissions limitation applies to the owner or operator of a simple cycle combustion turbine that is also an affected unit. The averaging period for the non-ozone season limit is all periods of operation from October 1 through April 30:

	Other-oil fired
Non-ozone season limit (7 month average)	0.15 lb/MMBtu

(5) **Combined cycle combustion turbines.**

(A) For Phase 1, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM systems, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a combined cycle combustion turbine:

	Gas-fired	Other-oil-fired
Combined cycle combustion turbine	42 ppmvd	65 ppmvd

(B) For Phase 1, the following non-ozone season emissions limitations apply to the owner or operator of a combined cycle combustion turbine that is also an affected unit. The averaging period for the non-ozone season limit is October 1 through April 30:

	Gas-fired	Other-oil-fired
Non-ozone season limit (7 month average)	0.15 lb/MMBtu	0.15 lb/MMBtu

(C) For Phase 2, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM systems, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a combined cycle combustion turbine:

	Gas-fired	Other-oil-fired
Combined cycle combustion turbine	25 ppmvd	42 ppmvd

(D) For Phase 2, the following non-ozone season average emissions limitation applies to the owner or operator of a combined cycle combustion turbine that is also an affected unit. The averaging period for the non-ozone season limit is October 1 through April 30:

	Other-oil-fired
Non-ozone season limit (7 month average)	0.15 lb/MMBtu

(6) **Reciprocating engines.**

(A) For Phase 1, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit without a NOx CEM system, apply to the owner or operator of a reciprocating engine:

	Gas-fired (g/bk hp-hr)	Other-oil-fired (g/bk hp-hr)	Landfill gas or digester gas, alone or fired with gas (g/bk hp-hr)
Reciprocating engine	2.5	8.0	No limit

(B) For Phase 2, the following emissions limitations, based on a daily block average for an emission unit with a NOx CEM system, and as determined by NOx emission testing pursuant to subsection (*l*) of this section for an emission unit

without a NOx CEM system, apply to the owner or operator of a reciprocating engine:

	Gas-fired (g/bk hp-hr)	Other-oil-fired (g/bk hp-hr)	Landfill gas or digester gas, alone or fired with gas (g/bk hp-hr)
Rich burn reciprocating engine	1.5	1.5	2.0
Lean burn reciprocating engine	1.5	2.3	2.0

(7) For an emission unit of a unit type that is not identified in subsections (d)(2) through (d)(6) or (d)(8) of this section, which unit combusts fuel for heating materials including air, NOx emissions shall not exceed 180 ppmvd, corrected to 12% carbon dioxide.

(8) For a fuel-burning emission unit of a type listed in subparagraphs (A) through (E) of this subdivision that is fired by a fuel other than a fuel identified with an emissions limitations in subdivision (2) through subdivision (6) of this subsection, NOx emissions shall not exceed 0.3 lb/MMBtu for Phase 1 and 0.1 lb/MMBtu for Phase 2:

(A) A boiler serving an EGU;

(B) A simple cycle combustion turbine;

(C) A combined cycle combustion turbine;

(D) An ICI boiler; or

(E) A reciprocating engine.

(9) The owner or operator of an emission unit that is capable of firing two or more fuels shall not cause or allow emissions of NOx from such emission unit in excess of the following:

(A) For fuel-burning equipment that simultaneously fires two or more different fuels, an emissions limitation calculated as follows:

(i) Multiplying the heat input of each fuel combusted by the emission limitation of this subsection for the particular emission unit and fuel used,

(ii) Summing those products, and

(iii) 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 emissions limitation of this subsection for the particular equipment and fuel used.

(10) The following averaging times for emission limitations shall be applicable to the owner or operator of an emission unit that has or is required to have a CEM system for NOx:

(A) For a non-ozone season emissions limitation, the period from October 1 to April 30, inclusive, including all periods of operation, except as provided in subsection (m)(3) of this section;

(B) For an ozone season emissions limitation, the period from May 1 to September 30, inclusive, including all periods of operation, except as provided in subsection (m)(3) of this section;

(C) For any other emissions limitation, a daily block average, measured from midnight to the following midnight, including all periods of operation, except as provided in subsection (m)(3) of this section;

(11) An owner or operator of an emission unit that does not monitor NOx emissions using a CEM system shall determine compliance with the emissions limitations of this subsection by performing NOx emission testing as required by subsection (*l*) of this section.

(12) The owner or operator of an emission unit for which construction commences on or after the effective date of this section shall achieve compliance with the applicable Phase 2 emissions limitations of this section upon the date of initial operation.

(13) The owner or operator of an emergency engine shall not operate the emergency engine for routine, scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups" or greater. The commissioner may exempt, by permit or order, the owner or operator of an emergency engine from this subdivision if such emergency engine is unattended and the testing is automated and cannot be modified from a remote location.

(14) For a combined cycle combustion turbine associated with a duct burner, the emissions from the turbine and duct burner system in aggregate, or either the turbine or duct burner if the turbine or duct burner operates alone, shall at all times be less than the applicable emissions limitations in subsection (d)(5) of this section.

(e) Reserved.

(f) Permanent cessation of operation.

The owner or operator of an existing emission unit subject to this section who is unable to comply with an emissions limitation of subsection (d) of this section at the beginning of the Phase 1 or the Phase 2 period and who has not submitted a plan pursuant to subsection (g) or a

demonstration pursuant to subsection (h) shall cease operation as of the first day of the Phase 1 or Phase 2 period, as applicable, or, at the discretion of the commissioner, enter into a legally enforceable cease operation agreement with the commissioner that includes a date no later than June 1, 2020 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation on which operation shall cease.

(g) Compliance options.

(1) The owner or operator of an existing emission unit subject to this section that is unable to operate in accordance with an applicable emissions limitation of subsection (d) of this section and for which the owner or operator does not intend to submit a demonstration pursuant to subsection (h) of this section or cease operations as provided in subsection (f) of this section shall submit a plan to the commissioner to operate such emission unit in accordance with a compliance option identified in this subsection. Such a plan shall be submitted to the commissioner no later than September 1, 2017, for a Phase 1 emissions limitation, or September 1, 2020, for a Phase 2 emissions limitation. A compliance option provided in this subsection shall be established by the commissioner through the issuance of an order, permit or permit modification to the owner or operator of such emission unit or units.

(2) The owner or operator of a boiler serving an EGU may operate in compliance with one of the options listed in this subdivision in lieu of complying with the applicable emissions limitations of subsection (d) of this section. The options are available as an alternative to any Phase 1 or Phase 2 emissions limitation set out in subsection (d) of this section, unless otherwise specified. The actions specified in a compliance plan for a Phase 1 emissions limitation shall be implemented no later than June 1, 2018 or, for a Phase 2 emissions limitation, no later than June 1, 2022, unless otherwise specified in this subdivision:

(A) For a Phase 1 emissions limitation, reduce the lb/MMBtu average emission rate from the subject emission unit by at least 40% from a 2014 baseline average emission rate, as determined by a CEM system according to former Section 22a-174-22 of the RCSA and excluding periods of startup, shutdown or malfunction, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed pursuant to former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operation. This compliance option shall be implemented no later than June 1, 2019;

(B) For a Phase 2 emissions limitation, reduce the lb/MMBtu average emission rate from the subject emission unit by at least 40% from a 2019 baseline emission rate, as determined by a CEM system according to subsection (m) of this section, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed either pursuant to subsection (*l*) of this section or former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations;

(C) For a Phase 1 emissions limitation, use existing, banked, NOx DERCs to comply with the applicable emissions limitations of subsection (d) of this section in accordance with an order or permit issued by the commissioner;

(D) For the Phase 1 emissions limitations in subparagraphs (A) and (B) of subsection (d)(2) of this section, accept an enforceable cap on mass emissions or hours of operation. The enforceable cap shall achieve the lower of a 40% reduction in subject emission unit 2014 allowable emissions or the average of the actual emissions for the two non-overlapping consecutive 12-month periods between January 1, 2014 and March 1, 2017 with the highest actual emissions, determined as follows:

(i) measured by a CEM system according to former section 22a-174-22 of the RCSA, or,

(ii) if the subject emission unit does not have a CEM system, calculated from the most recent emissions test performed pursuant to former section 22a-174-22 of the RCSA;

(E) For the Phase 2 emissions limitations in subparagraphs (C) and (D) of subsection (d)(2) of this section, accept an enforceable cap on mass emissions or hours of operation. The enforceable cap shall achieve the lower of a 40% reduction in subject emission unit 2019 allowable emissions or the actual emissions over the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest actual emissions, determined as follows:

(i) measured by a CEM system according to subsection (m) of this section, or,

(ii) if the subject emission unit does not have a CEM system, calculated from the most recent emissions test performed pursuant to former section 22a-174-22 of the RCSA or subsection (*l*) of this section, whichever applies;

(F) For a Phase 1 emissions limitation, commit to combust only gas if a permit or registration for the boiler serving an EGU allows the boiler to combust either gas or residual oil or other oil. This option is only available if operation on gas results in quantifiable annual NOx emissions equal to or less than the NOx emissions expected if the boiler serving an EGU operated in compliance with the applicable emissions limitations of subsection (d) of this section by combusting residual oil or other oil and gas. This compliance option shall be implemented no later than September 1, 2018; or

(G) Commit to retire another unit or units located at the same facility as the boiler serving an EGU. The unit or units to be retired shall cease operations as of June 1, 2019 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation. This option shall result in a reduction in maximum allowable mass

emissions equal to or better than the NOx emissions reduction that would be achieved if:

(i) For a Phase 1 emissions limitation, the boiler serving an EGU and the retired unit or units complied with the applicable Phase 1 emissions limitations of subsection (d) of this section during the consecutive 12-month period between January 1, 2014 and March 1, 2017 with the highest aggregate actual emissions for the boiler serving an EGU and the unit or units to be retired, or,

(ii) For a Phase 2 emissions limitation, the boiler serving an EGU and the retired unit or units complied with the applicable Phase 2 emissions limitations in subsection (d) of this section during the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest aggregate actual emissions for the boiler serving an EGU and the unit or units to be retired.

(3) The owner or operator of an ICI boiler may operate in compliance with one of the options listed in this subdivision in lieu of complying with the applicable emissions limitations of subsection (d) of this section. The options are available as an alternative to any Phase 1 or Phase 2 emissions limitation set out in subsection (d) of this section unless otherwise specified:

(A) For a Phase 1 emissions limitation, reduce the lb/MMBtu average emission rate from the subject emission unit by at least 40% from a 2014 baseline average emission rate, as determined by a CEM system according to former section 22a-174-22 of the RCSA and excluding periods of startup, shutdown or malfunction, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed pursuant to former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations. This compliance option shall be implemented no later than June 1, 2019;

(B) For a Phase 2 emissions limitation, reduce the lb/MMBtu average emission rate from the subject emission unit by at least 40% from a 2019 baseline average emission rate, as determined by a CEM system according to subsection (m) of this section, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed either pursuant to subsection (*l*) of this section or former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations;

(C) For a Phase 1 emissions limitation, use existing, banked, NOx DERCs to comply with the applicable emissions limitation of subsection (d) of this section in accordance with an order or permit issued by the commissioner;

(D) For the Phase 1 emissions limitations in subparagraphs (A) and (B) of subsection (d)(3) of this section, accept an enforceable cap on mass emissions or hours of operation. The enforceable cap shall achieve the lower of a 40% reduction in subject emission unit 2014 allowable emissions or the average of the actual emissions for the two non-overlapping consecutive 12-month periods between January 1, 2014 and March 1, 2017 with the highest actual emissions, determined as follows:

(i) measured by a CEM system according to former section 22a-174-22 of the RCSA, or,

(ii) if the subject emission unit does not have a CEM system, calculated from the most recent emissions test performed pursuant to former section 22a-174-22 of the RCSA;

(E) For the Phase 2 emissions limitations in subparagraphs (C) and (D) of subsection (d)(3) of this section, accept an enforceable cap on mass emissions or hours of operation. The enforceable cap shall achieve the lower of a 40% reduction in subject emission unit 2019 allowable emissions or the actual emissions over the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest actual emissions, determined as follows:

(i) measured by a CEM system according to subsection (m) of this section, or,

(ii) if the subject emission unit does not have a CEM system, calculated from the most recent emissions test performed pursuant to former section 22a-174-22 of the RCSA or subsection (*l*) of this section, whichever applies;

(F) For an ICI boiler subject to 40 CFR 63, Subpart DDDDD, operate as a "unit designed to burn gas 1 subcategory", as defined in 40 CFR 63.7575 or, for an ICI boiler subject to 40 CFR 63, Subpart JJJJJJ, operate as a "gas-fired boiler", as defined in 40 CFR 63.11237. This option is only available if operation on gas results in quantifiable annual NOx emissions equal to or less than the NOx emissions expected if the ICI boiler operated in compliance with the applicable emissions limitations of subsection (d) of this section by combusting residual oil or other oil and gas. This compliance option shall be implemented no later than September 1, 2018; or

(G) Commit to retire another unit or units located at the same facility as the ICI boiler. The unit or units to be retired shall cease operations as of June 1, 2019 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation. This option shall result in a reduction in maximum allowable mass emissions equal to or better than the NOx emissions reduction that would be achieved if:

(i) For a Phase 1 emissions limitation, the ICI boiler and the retired unit or units complied with the applicable Phase 1 emissions limitations of subsection (d) of this section during the consecutive 12-month period between January 1, 2014 and March 1, 2017 with the highest aggregate actual emissions for the ICI boiler and the unit or units to be retired, or,

(ii) For a Phase 2 emissions limitation, the ICI boiler and the retired unit or units complied with the applicable Phase 2 emissions limitations in subsection (d) of this section during the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest aggregate actual emissions for the ICI boiler and the unit or units to be retired.

(4) The owner or operator of a simple cycle combustion turbine may operate in compliance with one of the options listed in this subdivision in lieu of complying with the applicable emissions limitations of subsection (d) of this section. The options are available as an alternative to any Phase 1 or Phase 2 emissions limitation set out in subsection (d) of this section unless otherwise specified:

(A) To satisfy the non-ozone season emissions limitations in subsections (d)(4)(B) and (d)(4)(D) of this section, install and operate water injection technology. Water injection technology shall be operated at all times the simple cycle combustion turbine is operating, and the water-to-fuel ratio shall be continuously monitored. The water-to-fuel ratio that is acceptable during operation shall be established during the initial performance test, or, if the emission unit has a CEM system, during the initial relative accuracy test audit;

(B) For a Phase 1 emissions limitation, reduce the lb/MMBtu average emission rate or ppmvd average emission concentration from the subject emission unit by at least 40% from a 2014 baseline average emission rate or concentration, as determined by a CEM system according to former section 22a-174-22 of the RCSA and excluding periods of startup, shutdown or malfunction, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed pursuant to former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations. This compliance options shall be implemented no later than June 1, 2019;

(C) For a Phase 2 emissions limitation, reduce the lb/MMBtu average emission rate or ppmvd average emission concentration from the subject emission unit by at least 40% from a 2019 baseline average emission rate or concentration, as determined by a CEM system according to subsection (m) of this section, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed either pursuant to subsection (*l*) of this section or former Section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations;

(D) For a Phase 1 emissions limitation, use existing, banked, NOx DERCs to comply with the applicable emissions limitations of subsection (d) of this section in accordance with an order or permit issued by the commissioner;

(E) Limit the operations of the simple cycle combustion turbine only to Action 6 events implemented by ISO New England pursuant to ISO New England Operating Procedure No. 4 – Action During a Capacity Deficiency, effective August 12, 2014, or subsequent revisions thereof; or

(F) Commit to retire another unit or units located at the same facility as the simple cycle combustion turbine. The unit or units to be retired shall cease operations as of June 1, 2019 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation. This option shall result in a reduction in maximum allowable mass emissions equal to or better than the NOx emissions reduction that would be achieved if:

(i) For a Phase 1 emissions limitation, the simple cycle combustion turbine and the retired unit or units complied with the applicable Phase 1 emissions limitations of subsection (d) of this section during the consecutive 12-month period between January 1, 2014 and March 1, 2017 with the highest aggregate actual emissions for the simple cycle combustion turbine and the unit or units to be retired, or,

(ii) For a Phase 2 emissions limitation, the simple cycle combustion turbine and the retired unit or units complied with the applicable Phase 2 emissions limitations in subsection (d) of this section during the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest aggregate actual emissions for the simple cycle combustion turbine and the unit or units to be retired.

(5) The owner or operator of a combined cycle combustion turbine may operate in compliance with one of the options listed in this subdivision in lieu of complying with the applicable emissions limitations of subsection (d) of this section. The options are available as an alternative to any Phase 1 or Phase 2 emissions limitation set out in subsection (d) of this section unless otherwise specified:

(A) For a Phase 1 emissions limitation, use existing, banked, NOx DERCs to comply with the applicable emissions limitation of subsection (d) of this section in accordance with an order or permit issued by the commissioner;

(B) Commit to combust only gas if a permit or registration for the combined cycle combustion turbine allows the turbine to combust either gas or other oil. This option is only available if operation on gas results in quantifiable annual NOx emissions equal to or less than the NOx emissions expected if the combined cycle combustion turbine operated in compliance with the applicable emissions

limitations of subsection (d) of this section by combusting other oil and gas. For a Phase 1 emissions limitation, this option shall be implemented no later than September 1, 2018; or

(C) Commit to retire another unit or units located at the same facility as the combined cycle combustion turbine. The unit or units to be retired shall cease operations as of June 1, 2019 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation. This option shall result in a reduction in maximum allowable mass emissions equal to or better than the NOx emissions reduction that would be achieved if:

(i) For a Phase 1 emissions limitation, the combined cycle combustion turbine and the retired unit or units complied with the applicable Phase 1 emissions limitations of subsection (d) of this section during the consecutive 12-month period between January 1, 2014 and March 1, 2017 with the highest aggregate actual emissions for the combined cycle combustion turbine and the unit or units to be retired, or,

(ii) For a Phase 2 emissions limitation, the combined cycle combustion turbine and the retired unit or units complied with the applicable Phase 2 emissions limitations in subsection (d) of this section during the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest aggregate actual emissions for the combined cycle combustion turbine and the unit or units to be retired.

(6) The owner or operator of a reciprocating engine may operate in compliance with one of the options listed in this subdivision in lieu of complying with the applicable emissions limitations of subsection (d) of this section. The options are available as an alternative to any Phase 1 or Phase 2 emissions limitation of subsection (d) of this section unless otherwise specified:

(A) For a Phase 1 emissions limitation, reduce the g/bk hp-hr average emission rate from the subject emission unit by at least 40% from a 2014 baseline average emission rate, as determined by a CEM system according to former Section 22a-174-22 of the RCSA and excluding periods of startup, shutdown or malfunction, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed pursuant to former section 22a-174-22 of the RCSA. An owner or operator may request an alternative baseline year if the emissions in the alternative year are more representative of typical unit operations;

(B) For a Phase 2 emissions limitation, reduce the g/bk hp-hr average emission rate from the subject emission unit by at least 40% from a 2019 baseline average emission rate, as determined by a CEM system according to subsection (m) of this section, or, if the subject emission unit does not have a CEM system, by the most recent emission test performed either pursuant to subsection (*l*) of this section or former section 22a-174-22 of the RCSA. An owner or operator may request an

alternative baseline year if the emissions in the alternative year are more representative of typical unit operations;

(C) For a Phase 1 emissions limitation, use existing, banked, NOx DERCs to comply with the applicable emissions limitations of subsection (d) of this section in accordance with an order or permit issued by the commissioner;

(D) Limit the operations of the reciprocating engine only to Action 6 events implemented by ISO New England pursuant to ISO New England Operating Procedure No. 4 – Action During a Capacity Deficiency, effective August 12, 2014, or subsequent revisions thereof; or

(E) Commit to retire another unit or units located at the same facility as the reciprocating engine. The unit or units to be retired shall cease operations as of June 1, 2019 for a Phase 1 emissions limitation or June 1, 2023 for a Phase 2 emissions limitation. This option shall result in a reduction in maximum allowable mass emissions equal to or better than the NOx emissions reduction that would be achieved if:

(i) For a Phase 1 emissions limitation, the reciprocating engine and the retired unit or units complied with the applicable Phase 1 emissions limitations of subsection (d) of this section during the consecutive 12-month period between January 1, 2014 and March 1, 2017 with the highest aggregate actual emissions for the reciprocating engine and the unit or units to be retired, or,

(ii) For a Phase 2 emissions limitation, the reciprocating engine and the retired unit or units complied with the applicable Phase 2 emissions limitations in subsection (d) of this section during the consecutive 12-month period between June 1, 2018 and March 1, 2020 with the highest aggregate actual emissions for the reciprocating engine and the unit or units to be retired.

(7) A plan to operate in accordance with a compliance option provided in this subsection shall include the following information:

(A) Legal name(s), address(es) and telephone number(s) of the owner and operator of the emission unit that is the subject of the compliance option. If the owner or operator is a corporation or a limited partnership transacting business in Connecticut, provide the exact name as registered with the Secretary of State;

(B) Location address of the premises where the emission unit is located;

(C) Make and model of the emission unit;

(D) Actual emissions data, if available, or the manufacturer's estimates of emissions, if available;

(E) Identification of the compliance option that is the subject of the request and an explanation of the actions that will be taken to operate in compliance with that option. If the chosen option requires physical modification of an emission unit at the facility, a schedule for the modifications;

(F) An estimate of the NOx emissions reductions achieved through compliance with the chosen option including baseline emissions and the anticipated reduction achieved; and

(G) Any other information requested by the Commissioner upon reviewing the request.

(8) If a compliance option requires a new or modified permit pursuant to section 22a-174-3a of the RCSA, the owner or operator shall not commence an activity to implement the compliance option until the owner or operator has applied for and been issued the required permit or modification, except as otherwise authorized in section 22a-174-2a(e)(3)(C) of the RCSA subsequent to submission of a permit application.

(9) If the actions in a Phase 1 compliance plan do not require the owner or operator to either use NOx DERCs or apply for and obtain a permit under section 22a-174-3a of the RCSA, the owner or operator may take actions described in the plan no less than 60 days after submitting the plan.

(10) Any use of NOx DERCs for the purpose of this subsection shall be:

(A) Consistent with the provisions of 40 CFR 51, Subpart U and the U.S. Environmental Protection Agency's "Improving Air Quality with Economic Incentive Programs," (EPA-452/R-01-001: January 2001); and

(B) Any NOx DERC shall be used for the purpose of compliance with this section within five calendar years from the year of generation.

(11) Every compliance option provided in this subsection shall expire no later than May 31, 2030, by which date the subject emission unit shall comply with the applicable emissions limitations of this section or cease operation.

(h) Case-by-case RACT demonstration.

(1) An owner or operator may request the commissioner’s approval for a case-by-case emissions limitation for an emission unit if the owner or operator demonstrates to the commissioner’s satisfaction that an emissions limitation of subsection (d) of this section is not economically or technically feasible for the emission unit. In such a request for a case-by-case RACT determination, the owner or operator shall:

(A) Demonstrate that:

(i) The use of available emissions control technology is either technologically or economically infeasible for the emission unit that is the subject of the demonstration,

(ii) Each compliance option designated in subsection (g) of this section is either technologically or economically infeasible for the emission unit that is the subject of the demonstration, and

(iii) For the purposes of this subsection, economic feasibility is determined on a dollar/ton basis, where any determined value equal to or less than $12,300/ton NOx is presumed economically feasible;

(B) Recommend a case-by-case RACT emission limitation that represents the lowest emissions limitation reasonable for the emission unit. An owner or operator may also recommend additional actions that will reduce facility NOx emissions such as an operational standard, work practices, a requirement to use air pollution control technology on another unit at the facility or an energy efficiency improvement; and

(C) Calculate the NOx emission reduction achievable by implementation of the recommended emissions limitation and additional actions, if any, including the method used. A case-by-case RACT determination shall provide a net air quality benefit including real and quantifiable reductions in NOx emissions from the facility at which the emission unit is located.

(2) A request for a case-by case RACT determination shall be submitted to the commissioner for review no later than June 1, 2017 for a Phase 1 emissions limitation or January 1, 2020 for a Phase 2 emissions limitation. For a Phase 1 emissions limitations, an owner or operator who has submitted a request and case-by-case RACT demonstration may operate in accordance with the recommendations in the case-by-case RACT demonstration until the earlier of the date the commissioner issues a final decision on the submitted demonstration or June 1, 2022.

(3) A case-by-case RACT emissions limitation or additional actions shall be established in and apply to the emission unit or units in an order or permit issued by the commissioner to the owner or operator of such emission unit or units. The commissioner shall submit such order or permit to the Administrator for approval.

(4) In approving a case-by-case RACT demonstration and request, the commissioner may prescribe a design, equipment, work practice or operational standard, or combination thereof, as an alternative to the actions recommended by the owner or operator.

(5) Unless otherwise specified in an order or permit, operations in accordance with an approved or pending case-by-case demonstration shall expire no later than May 31, 2030, at which time the owner or operator shall operate the subject emission unit or units in compliance

with the applicable emissions limitations and other requirements of this section or cease operation.

(6) A case-by-case RACT demonstration submitted pursuant to this subsection shall be made on forms provided by the commissioner and performed according to procedures identified by the commissioner. A case-by-case RACT demonstration shall include the following steps:

(A) Identify all NOx emission control alternatives available for use on the emission unit that is the subject of the demonstration. Available control alternatives include lower emitting practices and processes such as the use of control techniques and work practices, use of add-on control technologies or improvement in the performance of installed control technologies, or a combination of lower emitting practices/processes and add-on control technologies;

(B) Eliminate infeasible options from further consideration after identifying the physical, chemical or engineering circumstance that would preclude successful use of the control option;

(C) Evaluate the control effectiveness of feasible alternatives in terms of NOx emissions reduced;

(D) Evaluate the cost of each feasible control alternative. Cost shall be evaluated on an annualized basis (8760 hours/year) unless the hours of operation of the emission unit are subject to a practicably enforceable limitation; and

(E) Evaluate the cost effectiveness of each feasible control alternative as an annualized $/ton of NOx reduced.

(7) The owner or operator submitting a request for a case-by-case RACT determination shall, prior to submitting the request:

(A) Publish notice of such request in a newspaper of general circulation in the affected area; and

(B) Notify the chief elected official of the municipality in which the emission unit that is the subject of the request is located.

(8) The owner or operator shall include a copy of the notice as it appeared in the newspaper in the submission to the commissioner of the case-by-case RACT demonstration and a signed statement certifying that the owner or operator notified the chief elected official of the municipality in which the emission unit that is the subject of the request is located.

(9) The owner or operator submitting a request for a case-by-case RACT determination shall hold an informational hearing at which the owner or operator shall explain the purpose of and basis for the request, if a request to hold such hearing is made to the owner or operator no later

than 14 days after the date of publication of the notice required pursuant to subdivision (7) of this subsection. The scheduled date for the hearing shall be no earlier than 30 days from the date of publication of the notice required pursuant to subdivision (7) of this subsection. If no request for the informational hearing is made within the 14 day period, the owner or operator may cancel the informational hearing. The notice shall identify the method and time for announcing that the hearing has been cancelled and provide a telephone number for the public to call to determine if the public hearing will occur as noticed or is cancelled. Within ten business days of the scheduled date of the public hearing, the owner or operator shall submit to the commissioner a certification that either the hearing was held as scheduled or that the hearing was cancelled for lack of a request. If a hearing is held, the certification shall be accompanied by a list of attendees and a summary of all comments made.

(10) The notice required pursuant to subdivision (7) of this subsection shall include the following information:

(A) A description of the demonstration sufficient for an interested person to understand the technical and economic basis for the elements of the demonstration and the resulting request to the Department, including the emission rate requested and the emissions limitation that would apply to the emission unit for which the demonstration is made if the request is not granted;

(B) Identification of the name of the owner or operator; a description of the emission unit to which the demonstration applies including the make and model, capacity and purpose; the location of the emission unit; and the name, address and telephone number of a person from whom more information about the demonstration may be obtained;

(C) The name, telephone number and electronic mail address of an individual from whom an interested person may obtain a copy of the demonstration;

(D) The date, time and location of the public informational hearing, if a request for such hearing is submitted within 14 days of the date of publication of the notice, and the address to send a request for such hearing; and

(E) If no request for the informational hearing is made to the owner or operator by the date designated in the notice, the method and time for announcing that the hearing has been cancelled and a telephone number for the public to call to determine if the public hearing will occur as noticed or is cancelled.

(i) Tune-up requirements.

(1) Except as provided in subdivision (2) of this subsection, the owner or operator of an emission unit subject to this section shall conduct an inspection and tune-up of the emission unit a minimum of once per calendar year beginning with year 2018. Each subsequent annual tune-up shall be performed no earlier than 180 days after the previous tune-up conducted under this section. The inspection and tune-up of the emission unit shall be conducted according to the

manufacturer's recommended procedures, or, if the manufacturer's recommendations are no longer available, according to best available practices.

(2) The owner or operator of an emission unit that is subject to 40 CFR 60 or 40 CFR 63 and required to conduct a periodic tune-up by the applicable requirements of 40 CFR 60 or 40 CFR 63 may conduct tune-ups according to the schedule and procedures of the applicable requirements of 40 CFR 60 or 40 CFR 63. If the period between tune-ups in the applicable requirements of 40 CFR 60 or 40 CFR 63 is greater than 60 months, a tune-up shall be conducted at least once every 60 months.

(j) Record keeping.

(1) The owner or operator of an emission unit shall retain all records and reports produced pursuant to this section for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records and reports shall be retained at the premises, unless the commissioner approves in writing the use of another location in Connecticut.

(2) The owner or operator of an emission unit shall make and keep the following records:

(A) For an emergency engine not subject to 40 CFR 63 Subpart ZZZZ, records of total monthly operating hours of such engine, identifying the dates and operating hours of non-emergency use and the reason for non-emergency operation. For an emergency engine subject to 40 CFR 63 Subpart ZZZZ, records shall be those required by 40 CFR 63.6655;

(B) The date and work performed for tune-ups, repairs, replacement of parts and other maintenance;

(C) Records of the dates and times 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;

(D) For an emission unit that has or is required to have a CEM system for NOx:

(i) records of all performance evaluations, calibration checks and adjustments on such monitor,

(ii) a record of maintenance performed,

(iii) all data necessary to complete the quarterly reports required under subsection (k)(3) of this section, and

(iv) Charts, electronically stored data, and printed records produced by such CEM system;

(E) For each tune-up, for each emission unit, conducted pursuant to subsection (i) of this section:

(i) The date on which the emission unit is tuned-up; the name, title and affiliation of the person performing the tune-up, and a description of work performed, and

(ii) The procedures used to inspect and perform adjustments;

(F) Copies of all documents submitted to the commissioner pursuant to this section; and

(G) Any other records or reports required by an order or permit issued by the commissioner pursuant to this section.

(k) Reporting.

(1) Not more than 60 days after the completion of emission tests conducted under subsection (*l)* of this section, the owner or operator of such emission unit shall submit a written report of the results of such testing to the commissioner.

(2) Not more than 60 days after the completion of a certification test conducted under the requirements of subsection (m) of this section, the owner or operator of such emission unit shall submit a written report of the results of such testing to the commissioner.

(3) The owner or operator of any emission unit that has or is required to have a CEM system for NOx shall submit to the commissioner, on forms provided by the commissioner, written quarterly reports of excess emissions and CEM system malfunctions. Such reports shall be submitted to the commissioner on or before January 30, April 30, July 30 and October 30 and shall include:

(A) All hourly data, in a format acceptable to the commissioner, for the three calendar month period ending the month before the due date of the report;

(B) The date and time of commencement and completion of each period of excess emissions;

(C) The magnitude and suspected cause of the excess emissions;

(D) Actions taken to correct the excess emissions;

(E) The date and time when each malfunction of the CEM system commenced and ended;

(F) Actions taken to correct each malfunction; and

(G) If no excess emissions or CEM system malfunctions occur during a quarter, the owner or operator shall indicate that no excess emissions or malfunctions occurred during the quarter.

(*l*) Emission testing.

(1) The owner or operator of an emission unit subject to this section shall demonstrate compliance with the applicable emissions limitations of this section by one of the following means:

(A) Conducting periodic emissions testing in accordance with this subsection;

(B) Conducting periodic emissions testing in accordance with an applicable New Source Performance Standard in 40 CFR 60, except as provided in subdivisions (2) and (7) of this subsection; or

(C) Installing and operating a CEM system for NOx in accordance with subsection (m) of this section.

(2) If an owner or operator is conducting testing in accordance with subdivision (1)(B) of this subsection and the applicable New Source Performance Standard does not identify a periodic test frequency, then the frequency of periodic emissions testing shall be determined according to the provisions of subdivision (4) of this subsection for Phase 1 and the provisions of subdivision (5) of this subsection for Phase 2.

(3) The owner or operator of an emission unit constructed after the effective date of this section shall conduct an initial emission test to demonstrate compliance with the Phase 2 emission limitations of this section no later than one hundred eighty (180) days after the emission unit commences operation.

(4) The owner or operator of an existing emission unit shall conduct an initial emissions test on a date during Phase 1 that is no more than 63 calendar months following the date of the last emission test performed pursuant to former section 22a-174-22(k) of the RCSA.

(5) The owner or operator of an existing emission unit subject to this section shall conduct the emissions test following the initial emissions test on a date after May 31, 2022 and no later than June 1, 2024. Subsequent emission tests shall be conducted no more than 63 calendar months following the date the previous emission test was conducted or the date the previous emission test was required to be conducted, whichever is earlier.

(6) Each emission test shall be conducted in accordance with section 22a-174-5 of the RCSA and compliance with the emissions limitations of this section shall be determined based on the average of three one-hour tests, each performed over a consecutive 60-minute period except as follows:

(A) As otherwise specified in an applicable New Source Performance Standard in 40 CFR 60; or

(B) If the commissioner determines that three one-hour tests are not reasonable given the location, configuration or operating conditions of an emission unit, the commissioner may approve testing where compliance with the emissions limitations of this section shall be determined based on the average of test runs shorter than a one-hour period. Approval of the commissioner for a shorter than one-hour test run shall be received prior to testing by submission of a request to the commissioner at least 120 days prior to the scheduled testing, requesting a specific test run duration and describing why a shorter time period is necessary.

(7) An owner or operator shall demonstrate compliance with the emissions limitations of this section using sampling and analytical procedures under 40 CFR 60, Appendix A or, for affected units, under 40 CFR 75, or under alternative procedures approved by the commissioner. Sampling shall be conducted when the emission unit is at normal operating temperature and, unless allowed otherwise by the commissioner in a permit or order, is operating at or above 90 percent of maximum capacity, except as follows:

(A) If the commissioner determines that operating at or above 90 percent of maximum capacity for an emission unit during sampling is not reasonable given the location, configuration or operating conditions of an emission unit, the commissioner may approve testing of an emission unit at an alternative maximum capacity where compliance with the emission limitations of subsection (d) of this section shall be determined based on operating at or above 90 percent of the alternative maximum capacity approved by the commissioner; and

(B) Any emission unit that has operated in excess of 100 percent of its maximum capacity at any time since the most recent performance test performed pursuant to this section shall be tested when the emission unit is operating at or above 90 percent of its highest operating rate since the most recent performance test performed pursuant to this section.

(m) Monitoring.

(1) The owner or operator of any emission unit that emits more than 100 tons of NOx from a single stack during any calendar year shall install, calibrate, maintain, operate and certify a CEM system for NOx for each such stack in accordance with section 22a-174-4 of the RCSA. For an emission unit subject to this section with a CEM system for NOx installed for any purpose prior to adoption of this section, the owner or operator shall calibrate, maintain, operate and certify such CEM system to demonstrate compliance with this section.

(2) If an owner or operator uses a CEM system to monitor NOx emissions, the owner or operator shall collect quality assured CEM data for all emission unit operating conditions. Data collection shall include periods of startup or shutdown, monitoring system malfunctions, out-of-control periods, while conducting maintenance or repairs, and periods of required monitoring

system quality assurance or quality control activities, such as calibration checks and required zero and span adjustments.

(3) Emissions data used to determine compliance with the applicable emissions limitations of subsection (d) of this section shall not include data collected during the following periods:

(A) When the monitoring system is out-of-control as specified in the facility-specific monitoring plan;

(B) While conducting required monitoring system quality assurance or quality control activities, including calibration checks and required zero and span adjustments;

(C) While conducting maintenance or repairs of the monitoring system to prevent or correct a malfunction; or

(D) When the emission unit is not operating.

(4) The owner or operator shall notify the commissioner in writing at least 30 days prior to conducting any performance or quality assurance testing of any CEM for NOx. Any such testing shall be conducted in accordance with a testing protocol approved by the commissioner. Any CEM for NOx shall be installed, calibrated and operated in accordance with the performance and quality assurance specifications contained in section 22a-174-4 of the RCSA and 40 CFR 60, Subpart A, Appendix B and Appendix F, or, for affected units, 40 CFR 75.

(5) Compliance with the seasonal limits of subsection (d) of this section shall be determined using emissions and operating data for the entire five-month period for an ozone season emissions limitation or for the entire seven-month period for a non-ozone season emissions limitation, except as follows:

(A) For the 2018 or 2022 ozone season, compliance shall be determined based on data collected June 1 through September 30; or

(B) If an emission unit commences initial operation during the ozone season or non-ozone season, compliance shall be determined based only on the portion of the season in which the unit operated.