(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 unit serving a cogeneration facility. An auxiliary boiler is considered a "boiler serving an electric generating unit."

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

"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.

"Daily block average" means the arithmetic mean of all valid emission concentrations recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

"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 Regulations of Connecticut State Agencies;

(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 gas turbine engine that is used as a means of providing mechanical or electrical power only during periods of testing and scheduled maintenance or during an emergency.

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

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

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

"Out-of-control period" means any period beginning with the quadrant corresponding to the completion of a daily calibration error, linearity check or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications and ending with the quadrant corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

"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 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 the section, beginning June 1, 2022 and continuing thereafter.

"Process heater" means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. A "process heater" is a device in which the combustion gases do not come into direct contact with process materials. "Process heaters" do not include units used for comfort heat or space heat, food preparation for on-site consumption, autoclaves or waste heat process heaters.

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

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

"Startup" means:

(A) Either the first-ever firing of fuel in an ICI boiler, boiler serving EGU or process heater for the purpose of producing electricity or supplying steam or heat for heating, or for any other purpose, or the firing of fuel in an ICI boiler or boiler serving EGU after a shutdown event for any purpose. "Startup" ends when any of the steam or heat from the ICI boiler, boiler serving EGU or process heater is used to generate electricity for sale over the grid or supplied for heating, or for any other purpose (including on-site use). Any fraction of an hour in which "startup" occurs constitutes a full hour of "startup;" or

(B) The period in which operation of a simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater is initiated for any purpose. "Startup" begins with either the first-ever firing of any fuel in a simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU or process heater for the purpose of producing electricity or useful thermal energy such as heat or steam for industrial, commercial, heating, or cooling purposes or for any other purpose after a shutdown event. "Startup" ends four hours after the emission unit generates electricity that is sold or used for any other purpose including on site use, or four hours after the simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater makes useful thermal energy such as heat or steam for industrial, commercial heating, or cooling purposes, whichever is earlier. Any fraction of an hour in which "startup" occurs constitutes a full hour of "startup."

"Shutdown" means the period in which cessation of operation of a simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater is initiated for any purpose. "Shutdown" begins when the simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater no longer generates electricity or makes useful thermal energy such as heat or steam for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater, whichever is earlier.

"Shutdown" ends when the simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater no longer generates electricity or makes useful thermal energy such as steam or heat for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the simple cycle turbine, combined cycle turbine, ICI boiler, boiler serving EGU, or process heater. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown.

"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.

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

"Unit designed to burn gas 1 subcategory" means "unit designed to burn gas 1 subcategory" as defined in 40 CFR 63.7575.

"Useful thermal energy" means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

(b) Applicability. This section applies to the owner or operator of the listed emissions units, including temporary units, located at a Title V source that is 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;

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

(6) Equipment that combusts fuel for heating materials 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 source subject to an emissions guideline issued under Section 129 of the Act.

(3) The emissions limitations, testing requirements, monitoring requirements and tune-up requirements of this section shall not apply to the following reciprocating engines:

(A) An emergency engine;

(B) Located at an electric generating facility licensed under 10 CFR 50 and used to provide emergency power or alternative power as mandated by the Nuclear Regulatory Commission;

(C) 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; or

(D) To provide electricity at a facility when there is an interruption of power from the electricity supplier during construction, facility maintenance or repair.

(4) This section shall not apply to an internal combustion 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) A reciprocating engine that meets the Tier 4 emissions standards of 40 CFR 1039, Subpart B for model year 2013 or later, is not subject to the following requirements:

(A) The restriction of subdivision (12) of subsection (d) of this section; and

(B) The emissions limitations of subsection (d) of this section.

(6) The emissions limitations, testing requirements and monitoring requirements 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 emissions limitations, testing requirements, monitoring requirements and tune-up requirements of this section shall not apply to the emission units listed in subparagraphs (A) through (C) 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) Oil-fired turbines or fast-response double-furnace Naval boilers that generate power to create simulated high-altitude atmospheres for testing of aircraft engines;

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

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

Subsections (d) through (h) in separate document.

(8) The emissions limitations, testing requirements, monitoring requirements and tune-up requirements 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 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.

(i) Tune-up requirements. 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. The inspection and tune-up of the emission unit shall be conducted according to the manufacturer's recommended procedures.

(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, records of total monthly operating hours of such engine, identifying the dates and operating hours of non-emergency use;

(B) Records, including costs of parts and labor, of all tune-ups, repairs, replacement of parts and other maintenance;

(C) 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;

(D) For an emission unit that has or is required to have a continuous emissions monitor for NOx:

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

(ii) a record of maintenance procedures,

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

(iv) all charts, electronically stored data, and printed records produced by such continuous emissions monitor;

(E) For any emission unit using NOx DERCs to comply:

(i) the number of NOx DERCs in its possession, purchased, used, and expired by serial number each year,

(ii) the number of NOx DERCs used during the ozone season and non- ozone season,

(iii) a sample spreadsheet with formulas used to determine reported numbers,

(iv) monthly operating reports of actual fuel usage including the fuel Btu content, number of barrels, gallons, and cubic feet used for each fuel type,

(v) daily MMBtu for each fuel type used and actual heat input, daily NOx mass emissions, and

(vi) actual NOx emission rates (24-hour average) or NOx concentration in ppm;

(F) For any affected unit using NOx DERCs in the ozone season to comply with the ozone season five-month average or using NOx DERCs in the non-ozone season to comply with the non-ozone season seven-month average;

(i) a sample spreadsheet with formulas used to determine reported numbers,

(ii) actual fuel usage including the fuel Btu content, number of barrels, gallons, and cubic feet used for each fuel type,

(iii) MMBtu for each fuel type and actual heat input, and

(iv) actual NOx emission rates (five month average for the ozone season or seven month average for the non-ozone season);

(G) For each emission unit for each tune-up:

(i) The date on which the emission unit is inspected and the name, title and affiliation of the person performing the inspection, if no adjustment to the emission unit is necessary,

(ii) The date on which the emission unit is adjusted and the name, title and affiliation of the person performing the adjustment, and

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

(H) For each boiler serving an EGU, ICI boiler, simple cycle turbine or combined cycle turbine during each period of startup:

(i) The date and time that startup begins,

(ii) The date and time that startup ends,

(iii) The electrical load for each hour of startup, if applicable, and

(iv) The quantity and heat input of fuel for each hour of startup*;*

(I) For each boiler serving an EGU, ICI boiler, simple cycle turbine or combined cycle turbine during each period of shutdown:

(iv) The date and time that shutdown begins,

(ii) The date and time that shutdown ends;

(iii) The quantity and heat input of fuel for each hour of shutdown, and

(iv) The electrical load for each hour of shutdown, if applicable;

(J) Copies of all documents submitted to the Commissioner pursuant to this section; and

(K) 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 (xx) 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 (xxx) 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 continuous emissions monitor for NOx shall submit to the commissioner written quarterly reports of excess emissions and continuous emissions monitor 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 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) All actions taken to correct the excess emissions;

(E) The date and time when each malfunction of the continuous emission monitor commenced and ended; and

(F) All actions taken to correct the malfunction.