



Connecticut Department of Energy and Environmental Protection



Section 22a-174-22 – The Next Generation: Progress Report

9 December 2014



Connecticut Department of Energy and Environmental Protection

Applicability: Eliminating Confusion from High Daily Emitters

- Much confusion in current Section 22(b) arises from the inclusion of the daily high emitter provisions (Section 22b(b)(1)(B))
 - RACT is focused on major sources
 - Short-term high emitters are important from an ozone attainment perspective, but do not have to be addressed in the NOx RACT regulation.
- Intention: Move the short-term high emitter requirements to a separate regulatory section. Focus Section 22:TNG only on major sources.



Applicability (Roughly)

- (b) Applicability.** This section applies to the owner or operator of the listed emissions units located at a Title V source that is major for NO_x:
- (1) A boiler serving an electric generating unit;
 - (2) A simple cycle turbine with MRC of 5 MMBtu/hr or more;
 - (3) A combined cycle turbine with MRC of 5 MMBtu/hr or more;
 - (4) An ICI boiler;
 - (5) A reciprocating engine;
 - (6) Equipment that combusts fuel for heating materials and that has a MRC of 5 MMBtu/hr or more; or
 - (7) Any other stationary fuel-burning equipment with a MRC of 5 MMBtu/hr or more.



Exemptions/Exceptions (roughly)

- The requirements of this section shall not apply to a mobile source.
- The requirements of this section shall not apply to a municipal waste combustor.
- The emissions limitations, testing requirements and monitoring requirements of this section shall not apply to the following reciprocating engines:
 - An emergency engine
 - 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
 - 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
 - To provide electricity at a facility when there is an interruption of power from the electricity supplier during construction, facility maintenance or repair.



More Exemptions/Exceptions

- 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.
- 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.
- An emergency 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 restriction of subdivision (#) of subsection (f) of this section. [the no testing on forecasted ozone days provision]



Engine and Turbine Breakdown

- Almost no small (<5 MMBtu/hr) turbines.
- Many small (<3MMBtu/hr) engines, most of which are diesel-fueled.
- We will exempt turbines <5 MMBtu/hr due to low emissions impact and will include an annual tune-up requirement for engines <3 MMBtu/hr.



Engine and Turbine Breakdown by the Numbers

Engines		<3 MMBtu/hr	≥ 3 MMBtu/hr
Single fuel	861	295	566
Dual fuel	13	3	10
Triple fuel	2	2	
Total	876	300	576

Turbines		<5 MMBtu/hr	5 - <100 MMBtu/hr	≥ 100 MMBtu/hr
Single fuel	109	8	51	50
Dual fuel	45		7	38
Triple fuel	1			1
Total	155	8	58	89



Engine Fuel Breakdown

Design Capacity MMBtu/hr	Natural gas	Landfill Gas/ Digester Gas	LPG	Gasoline	Kerosene	Diesel	Total	%
< 3	23	0	36	13	4	219	295	34.3
≥ 3	43	3	1		74	445	566	65.7
Total	66	3	37	13	78	664	861	
%	7.7	0.3	4.3	1.5	9.1	77.1		



Still working on . . .

- Under what circumstances are startup/shutdown provisions allowed in federal rules?
 - Includes data exclusions
- Emissions testing:
 - If possible, maintain consistency with federal rules.
- Annual tune up requirement for all sources
 - Use language from 2006 draft?
 - Use Boiler MACT tune up language?



Additional Information

- We will retain the 700 ppmvd process source emission limit.
- We will retain the 180 ppmvd emission limit for a source that combusts fuel for heating materials (e.g., heaters/dryers for asphalt production).
- We will retain the “no testing on forecasted ozone exceedance day” requirement.
- For a boiler serving an electric generating unit:
 - The Phase 1 ozone season limit applies to CAIR sources.
 - The 24-hr limits of Phase 2 apply to CAIR sources and auxiliary boilers.



And Even More Reasons Why Kirk is Better



- Kirk would never waste the holodeck on something stupid like Dixon Hill.
- Kirk would never allow an acting ensign to lock out his command codes.
- Prime Directive? What Prime Directive?
- Kirk was never infiltrated by the Borg and used against the Federation.
- Kirk travelled through the Great Barrier, met God and was not impressed.
- Kirk never asked the bartender for advice.
- Picard quotes Shakespeare for fun. Kirk quotes Shakespeare to intimidate his enemies.
- Kirk never dressed in green tights and pretended to be Robin Hood.

