



DEPARTMENT ORDER

**Naval Computer and
Telecommunications Area Master
Station Atlantic Detachment Cutler
Washington County
Cutler, Maine
A-210-70-G-A**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #3**

FINDINGS OF FACT

After review of the Part 70 License amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.), § 344 and § 590, the Maine Department of Environmental Protection (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT DET)
LICENSE TYPE	Part 70 Significant License Modification
NAICS CODES	9711 National Security (Federal Facility) 4911 Electrical Power Generation 3443 Oil Storage Tanks
NATURE OF BUSINESS	Naval Communications
FACILITY LOCATION	Route 191, Cutler, Maine

The Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT DET, the Cutler facility, or Cutler) uses diesel engines to generate electricity to operate communications equipment and provide energy for space heating. The Cutler facility is an existing source operating under the Part 70 License A-210-70-D-R issued June 19, 2012, and two subsequently issued amendments: A-210-70-E-A issued September 6, 2013, and A-210-70-F-A issued August 3, 2015. This facility is considered a Part 70 major stationary source, as defined in *Definitions Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 100 (as amended).

The Cutler facility has requested the amendment of their Part 70 License to incorporate the terms and conditions of two New Source Review (NSR) licenses: NSR license A-210-77-1-A issued December 29, 2014, and NSR license A-210-77-2-A issued August 1, 2014.

B. Emission Equipment

The following emission units are addressed by this Part 70 License Amendment:

Package Boilers

Equipment	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type (% sulfur)	Dates		Stack
				Manuf.	Install.	
VLF-103-B#7	3.0	27.5	Distillate fuel (0.0015%)	2012	6/2013	STVLF-103-7
VLF-103-B#8	3.0	27.5				
VLF-100-B#15	2.6	18.8	Distillate fuel (0.5%)	2000	2000	STVLF-100-15

Non-Emergency Stationary Internal Combustion Engines

Emission Unit ID	Heat ¹ Input, MMBtu/hr	Unit Output, kW	Unit Type	Fuel (% sulfur)	Dates		
					Manuf.	Install.	Out of Service/ Overhaul
VLF-103-D#2	32.0	3000	Electrical Generation, Non- Emergency	Distillate fuel (0.0015%)	1975	1976	6/2009-1/2010
VLF-103-D#3	32.0	3000					11/2013-6/2015
VLF-103-D#4	32.0	3000					4/2010-10/2013
VLF-103-D#5	32.0	3000					11/2013-6/2014

Emergency Stationary Internal Combustion Engines

Unit ID	Heat Input Capacity (MMBtu/hr)	Unit Output Capacity	Max. Firing Rate	Fuel Type, % sulfur	Dates		Stack #
					Manuf.	Install.	
VLF-123-01 (Fire Pump)	0.80	80	3.6 gal/hr	Distillate fuel, 0.0015%	02/2009	7/2009	STVLF-123-01
VLF-135-01	0.50	50	295cfh	Natural gas, negligible	11/2003	7/2004	STVLF-135-01
VLF-130-01	0.35	35	206 cfh		05/2004	7/2004	STVLF-130-01
VLF-503-01	0.80	80	1185 cfh		11/2003	7/2004	STVLF-503-01

¹ Heat input was derived using known generator outputs, 138,000 Btu/gallon of diesel fuel, and an engine efficiency of 32%.

MUSE Engines: Emergency Generators

Equipment	Maximum Input Capacity (MMBtu/hr)	Maximum Output Capacity	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
VLF-MUSE-1A	8.2	Each unit: 840 kW (approx. 1170 hp)	57.4	Distillate Fuel, 0.0015% sulfur	Stack-MUSE-1A
VLF-MUSE-1B	8.2		57.4		Stack-MUSE-1B
VLF-MUSE-1C	8.2		57.4		Stack-MUSE-1C
VLF-MUSE-1D	8.2		57.4		Stack-MUSE-1D
VLF-MUSE-3A	8.2		57.4		Stack-MUSE-3A
VLF-MUSE-3B	8.2		57.4		Stack-MUSE-3B
VLF-MUSE-3C	8.2		57.4		Stack-MUSE-3C
VLF-MUSE-3D	8.2		57.4		Stack-MUSE-3D
VLF-MUSE-3E	8.2		57.4		Stack-MUSE-3E
VLF-MUSE-5A	8.2		57.4		Stack-MUSE-5A
VLF-MUSE-5B	8.2		57.4		Stack-MUSE-5B
VLF-MUSE-5C	8.2		57.4		Stack-MUSE-5C
VLF-MUSE-5D	8.2		57.4		Stack-MUSE-5D
VLF-MUSE-14	8.2		57.4		Stack-MUSE-14

There are three fuel tanks used at the Cutler facility to support the operation of the MUSE engines, one 16,890-gallon tank and two 1,500 gallon tanks. Only one fuel storage tank has a capacity greater than 10,000 gallons, the licensing threshold level as identified in *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115, and was therefore included in NSR license A-210-77-2-A (August 1, 2014). The other two are mentioned for informational purposes only.

A correction of the Parts Washer capacity was also included in the NSR license. The capacity of the Building 103 main deck Parts Washer, identified in air emission license A-210-70-D-R (2012) as 30 gallons, is actually 2 gallons.

All rules, regulations, or statutes referenced in this air emission license amendment refer to the amended version in effect as of the issued date of this license amendment.

C. Definition

Distillate Fuel. For the purposes of this license, *distillate fuel* means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

D. Application Classification

Part 70 Significant License Modification procedures are used for applications requesting license changes that do not qualify as Part 70 Administrative Revisions or Part 70 Minor License Modifications. The two NSR licenses, A-210-77-1-A (December 29, 2014) and A-210-77-2-A (August 1, 2014) authorized the addition of three new natural gas-fired generators, a distillate fuel-fired fire pump engine, the reconstruction of four existing electricity generating units, and the replacement of a 6.4 MMBtu/hour boiler with two smaller boilers. Total licensed emissions from the facility from these changes were increased by the following amounts:

PM (tons/year)	PM₁₀ (tons/year)	PM_{2.5} (tons/year)	SO₂ (tons/year)	NO_x (tons/year)	CO (tons/year)	VOC (tons/year)
1.88	1.88	1.88	0.04	6.21	1.31	0.17

Based on changes to the licensed emission levels, the application is not considered either a Part 70 Administrative Revision or Part 70 Minor License Modification and has been processed as a Part 70 Significant License Modification under *Part 70 Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 140 (as amended).

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment and for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 C.M.R. ch. 100. BACT for the new sources and modifications specific to this licensing action was established in the two NSR licenses whose terms and conditions are being incorporated via this Part 70 license amendment.

B. Boilers: VLF-103-B#7 (B#7), VLF-103-B#8 (B#8), and VLF-100-B#15 (Boiler #15)

1. Boiler Descriptions

a. Boilers VLF-103-B#7 (B#7) and VLF-103-B#8 (B#8)

Package boilers VLF-103-B#7 and VLF-103-B#8 (B#7 and B#8) replace existing boiler VLF-103-B#6 (B#6). Each of these two boilers has a design maximum heat input capacity of 3.0 MMBtu/hour firing distillate fuel with a maximum sulfur content of 0.0015% by weight. The two boilers were manufactured in 2012 and installed in June of 2013.

Boiler VLF-103-B#6 has been dismantled and removed from the site, and Cutler has requested its removal from the facility's Part 70 License. B#6 is hereby removed from the facility's Part 70 License.

Boilers B#7 and B#8 support facility heating needs. Both boilers exhaust through existing Stack STVLF-103-7, the stack formerly associated with Boiler B#6. This stack releases at 16.15 meters (53 ft) above ground level and has an inside diameter of 0.457 meter (1.5 ft).

At any one time, Cutler shall operate either B#7 or B#8 but not both, except during periods when one of the two is being brought off-line and the other is being brought on-line. Both boilers B#7 and B#8 may be operated concurrently only when none of the non-emergency generators VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 are in operation.

b. Boiler #15

Cutler operates Boiler VLF-100-B#15 (Boiler #15) to provide heat for Building 100. A Weil-McLean unit, Boiler #15 was manufactured and installed in 2000 with a maximum design heat input capacity of 2.6 MMBtu/hour. It fires distillate fuel with maximum sulfur content of 0.5% by weight. Emissions exit through a 19.6 foot stack.

Fuel Sulfur Content Requirements

Boiler #15 is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. §603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale in the State of Maine any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in Boiler #15 shall not exceed 0.0015% by weight (15 ppm).

2. New Source Performance Standards (NSPS)

Boilers B#7, B#8, and #15 are not subject to NSPS *Standards of Performance for Boilers Manufactured after June 9, 1989*, 40 C.F.R. Part 60, Subpart Dc, because they each have a maximum heat input less than 10 MMBtu/hour. [40 C.F.R. § 60.40c]

3. NO_x Reasonably Available Control Technology (RACT)

Potential NO_x emissions from each boiler B#7, B#8, and Boiler #15 are less than 10.0 tons per year; therefore, these units are exempt from NO_x RACT requirements. [06-096 C.M.R. ch. 138 (1)(B)(1)]

4. BACT Findings

The BACT emission limits for B#7, B#8, and Boiler #15 firing distillate fuel were based on the following:

Pollutant	Emission Factor	Source of Factor
PM, PM ₁₀ , PM _{2.5}	Boilers B#7 and B#8: 0.12 lb/MMBtu	06-096 C.M.R. ch. 103
	Boiler #15: 2 lb/1000 gal	AP-42, Table 1.3-1 (5/10)
SO ₂	Boilers B#7 and B#8: 0.0015 lb/MMBtu	based on firing 15 ppm sulfur fuel (0.0015% sulfur by weight)
	Boiler #15: 0.5 lb/MMBtu	Based on firing fuel with a sulfur content of 0.5% by weight
NO _x	20 lb/1000 gal	AP-42, Table 1.3-1 (5/10)
CO	5 lb/1000 gal	
VOC	0.34 lb/MMBtu	AP-42 Table 1.3-3 (5/10)

Pollutant	Emission Factor	Source of Factor
Visible Emissions	N/A	06-096 C.M.R. ch. 101 (2)(B)(1)(b)

The BACT emission limits for these boilers are the following:

Unit	PM (lb/MMBtu)	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler B#7	0.12	0.36	0.36	0.36	0.005	0.55	0.14	0.01
Boiler B#8	0.12	0.36	0.36	0.36	0.005	0.55	0.14	0.01
Boiler #15	--	0.04	0.04	0.04	1.3	0.38	0.09	0.006

Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period.

The quantity of distillate fuel fired in B#7 and B#8 combined shall not exceed 240,900 gallons/year, the equivalent of operating one boiler at its maximum firing rate for 8,760 hours/year.

5. Periodic Monitoring

Periodic monitoring for Boilers B#7, B#8, and #15 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used, the quantity of fuel used, and the sulfur content of the fuel.

6. NESHAP: 40 C.F.R. Part 63, Subpart JJJJJ

Boilers B#7, B#8, and #15 are subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. Boilers B#7 and B#8 are considered new boilers rated less than 10 MMBtu/hour. Boiler #15 is considered an existing oil boiler rated less than 10 MMBtu/hour.

A summary of the applicable requirements of Subpart JJJJJ is listed below. Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to the U.S. Environmental Protection Agency (EPA) was due no later than January 20, 2014, or, for new sources, within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)] However, new sources that

have applicable work practice standards or management practices are not required to complete an initial performance tune-up. [40 CFR Part 63.11210(f)] Per EPA, if the regular tune-up is the only requirement, new boilers also do not have to submit a Notice of Compliance Status (NOCS). Thus, Cutler is not required to submit a NOCS for Boilers B#7 and B#8.

(2) Boiler Tune-Up Program

(a) A boiler tune-up program shall be implemented in accordance with Subpart JJJJJ. New sources, such as Boilers B#7 and B#8, which have applicable work practice standards or management practices are not required to complete an initial performance tune-up. [40 C.F.R. § 63.11210(f)]

i. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operation of the boiler. For B#7, B#8, and Boiler #15, a tune-up is required every five years, because each of these units has a heat input capacity of less than 5 MMBtu/hour. [40 C.F.R. § 63.11223(a) and Table 2]

ii. For each tune-up, a tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. Each report shall contain the concentration of CO in the effluent stream (ppmv) and of oxygen (volume percent), measured at high fire or typical operating load, both **before** and **after** the boiler tune-up; a description of any corrective actions taken as part of the tune-up of the boiler; and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 C.F.R. § 63.11223(b)(6)]

The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 C.F.R. § 63.11225(b)]

(b) The boiler tune-up program shall be performed as specified below:

i. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hour. [40 C.F.R. § 63.11223(b)(1)]

- ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
- iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hour. [40 C.F.R. § 63.11223(b)(3)]
- iv. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
- v. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, **before** and **after** adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
- vi. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review. [40 C.F.R. § 63.11225(c)]

C. Non-Emergency Stationary Internal Combustion Engines

The non-emergency engines, units VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 (D#2, D#3, D#4, and D#5) are identical 3000 kW units, each with a maximum heat input capacity of 32.0 MMBtu/hour firing distillate fuel with a maximum sulfur content of 0.0015% by weight at 160 gallons/hour each. Unit D#2 was overhauled in June of 2010, and Unit D#4 was overhauled in July of 2011. Units D#3 and D#5 were overhauled between November 2013 and November 2014. Each of the generators is maintained with ignition timing retard for NO_x emissions control and is thus considered to be meeting the requirements of NO_x RACT as specified in 06-096 C.M.R. ch. 138. Each of these units was manufactured in 1975 and installed in 1976.

1. New Source Performance Standards (NSPS)

The federal regulation *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart III, applies to any stationary compression ignition (CI) internal combustion engine (ICE) which is modified or reconstructed after July 11, 2005. In NSR license A-210-77-1-A (December 29, 2014), it was ascertained that the overhaul of each of these units constituted neither modification nor reconstruction, in accordance with 40 C.F.R. Part 60, Subpart A. Because none of these units were modified or reconstructed after July 11, 2005, these units are not subject to 40 C.F.R. Part 60, Subpart III.

2. National Emission Standards for Hazardous Air Pollutants (NESHAP)

Federal regulation *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* (RICE), 40 C.F.R. Part 63, Subpart ZZZZ, is applicable to D#2, D#3, D#4, and D#5. These units are existing stationary CI RICE located at an area source of HAP emissions and are required by this Subpart to comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. [40 C.F.R. § 63.6595 (a)(1)]

Requirements of NESHAP Subpart ZZZZ applicable to these units are being addressed through a consent agreement between the Cutler facility and the EPA, taking into account the facility's plans to acquire shore power and relegate these four generators as emergency units, the facility's operational needs, and the timelines and requirements associated with these issues.

NCTAMS LANT DET shall comply with the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ.

3. BACT Findings

The BACT emission limits for these generators firing distillate fuel are based on the following:

Pollutant	Emission Factor	Source of Factor
PM, PM ₁₀ , PM _{2.5}	0.08 lb/MMBtu	A-210-77-1-A (December 29, 2014), BACT
SO ₂	0.0015 lb/MMBtu	based on firing 15 ppm sulfur fuel (0.0015% sulfur by weight), BACT
NO _x	3.2 lb/MMBtu	A-210-70-B-A (3/18/2004), BACT/BPT
CO	0.85 lb/MMBtu	A-210-70-B-A (3/18/2004) and
VOC	0.1 lb/MMBtu	A-210-70-D-R (6/19/2012), BACT/BPT
Visible Emissions	N/A	06-096 C.M.R. ch. 101 and BACT

The BACT emission limits for these units are the following:

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
VLF-103-D#2	2.56	2.56	2.56	0.05	102.4	27.2	3.2
VLF-103-D#3	2.56	2.56	2.56	0.05	102.4	27.2	3.2
VLF-103-D#4	2.56	2.56	2.56	0.05	102.4	27.2	3.2
VLF-103-D#5	2.56	2.56	2.56	0.05	102.4	27.2	3.2

Visible emissions from each of the distillate fuel-fired non-emergency generators shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a three hour period. [A-210-70-A-I (January 14, 2002), BPT]

4. Operating Scenario Limitation

The results of emissions modeling demonstrate compliance with ambient air quality standards (AAQS) when only one of these units is operated concurrently with either Boiler B#7 or Boiler B#8. Therefore, at any one time, Cutler shall operate one of the Units VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, or VLF-103-D#5 but not two or more concurrently, except during periods when one of the units is being brought off-line and another is being brought on-line. However, Cutler may operate more than one of these units concurrently for short periods of time for emergency purposes (i.e., de-icing), but such concurrent operation shall not exceed 100 hours per year. Cutler shall document the total number of hours two or more of these units operate concurrently for such emergency purposes and make these records available upon request. [A-210-70-D-R (June 19, 2012) and A-210-77-1-A (December 29, 2014), BPT]

D. Emergency Stationary Internal Combustion Engines

Through the two NSR licenses, the Cutler facility added several emergency stationary internal combustion engines to its licensed air emission sources. Units in this category include the following:

- A Fire Pump which fires distillate fuel;
- Three emergency engines which fire natural gas; and
- 14 emergency back-up units provided, installed, and maintained by the Navy's Seabee² Mobile Utilities Support Equipment (MUSE) program, referred to as MUSE engines, which fire distillate fuel.

1. Descriptions

a. Fire Pump Engine VLF-123-01 (0.8 MMBtu/hour; distillate fuel)

This 0.8 MMBtu/hour (80 kW) fire pump fires 0.0015% sulfur distillate fuel at a maximum rate of 3.6 gallons/hour. It was manufactured in February 2009 and installed in July 2009 and exhausts through stack STVLF-123-01.

b. Emergency Generator VLF-135-01 (0.5 MMBtu/hour; natural gas)

This 0.5 MMBtu/hour (50 kW) emergency engine fires natural gas at a maximum rate of 295 cubic feet per hour (cfh). It was manufactured in November 2003 and installed in July 2004. It exhausts through stack STVLF-135-01.

c. Emergency Generator VLF-130-01 (0.35 MMBtu/hour; natural gas)

This 0.35 MMBtu/hour (35 kW) emergency engine fires natural gas. It was manufactured in May 2004 and installed in July 2004. It exhausts through stack STVLF-130-01.

d. Emergency Generator VLF-503-01 (0.8 MMBtu/hour; natural gas)

This 0.8 MMBtu/hour (80 kW) emergency engine fires natural gas at a maximum firing rate of 1185 cfh. It was manufactured in November 2003 and installed in July 2004. It exhausts through stack STVLF-503-01.

e. MUSE Engines (14 units at 8.2 MMBtu/hour each; all fire distillate fuel)

Each of the 14 MUSE engines is rated at 8.2 MMBtu/hour, fires distillate fuel, and was manufactured after April 1, 2006.

² The word "Seabee" comes from the initials CB, of the United States Navy Construction Battalion (CB).

2. Definition from Potentially Applicable Federal Rules: *Emergency Stationary Reciprocating Internal Combustion Engine*

Federal regulations which may be applicable to the emergency generators at this facility are New Source Performance Standards (NSPS) 40 C.F.R. Part 60, Subpart IIII and National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 C.F.R. Part 63, Subpart ZZZZ. The NSPS subpart provides a definition for Emergency stationary internal combustion engines (ICE), and the NESHAP subpart provides a definition for emergency stationary reciprocating internal combustion engines (RICE). With the exception of the acronyms ICE vs. RICE, the definitions are identical, as provided here. [40 C.F.R. Part 60, Subpart IIII at 40 C.F.R. § 60.4211(f) and § 60.4219; 40 C.F.R. Part 63, Subpart ZZZZ]

Definition

An *emergency stationary ICE* or *emergency stationary RICE* is any stationary reciprocating internal combustion engine that meets all of the following criteria:

- a. The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted; stationary ICE used to pump water in the case of fire or flood; etc. There is no time limit on the use of emergency stationary ICE in emergency situations.
- b. Paragraph (a) above notwithstanding, the emergency stationary ICE may be operated for the purposes specified below for a maximum of 100 hours per calendar year:

Maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

- c. Paragraphs (a) and (b) above notwithstanding, emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year as provided in paragraph (b) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except if the following conditions are met:

- (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
- (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (3) The dispatch follows reliability, emergency operation, or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines.
- (4) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission, or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

3. New Source Performance Standards (NSPS)

Emergency engines firing distillate fuel at the Cutler facility and manufactured after 2006 are subject to NSPS *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 CFR Part 60, Subpart III. Thus, Fire Pump Engine VLF-123-01 and all of the MUSE engines are subject to applicable requirements of Subpart III. The natural gas-fired engines were manufactured before the applicability date of *Standards of Performance for Spark Ignition Internal Combustion Engines (SIICE)*, Subpart JJJJ, and are thus not subject to Subpart JJJJ. [40 C.F.R. § 60.4200(a)(2)]

a. Fire Pump Engine #VLF-123-01: 40 C.F.R. Part 60, Subpart IIII Requirements

(1) Manufacturer Certification Requirement

The unit shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement

The distillate fuel fired in the unit shall not exceed 15 ppm sulfur (0.0015% sulfur by weight). [40 C.F.R. § 60.4207(b)]

(3) Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on Fire Pump VLF-123-01. [40 C.F.R. § 60.4209(a)]

(4) Annual Time Limit for Maintenance and Testing

The engine shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). These limits are based on a 12-month rolling total. Compliance shall be demonstrated by a written log of all fire pump operating hours. [40 C.F.R. § 60.4211(f) and A-210-77-1-A (December 29, 2014), BPT]

(5) Operation and Maintenance Requirements

The unit shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Cutler that are approved by the engine manufacturer. Cutler may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

b. MUSE Engines: 40 CFR Part 60, Subpart IIII Requirements

Subpart IIII requirements applicable to the MUSE Engines are identified in the following paragraphs.

(1) Manufacturer Certification Requirement

The generators shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement

The distillate fuel fired in the generators shall not exceed 15 ppm sulfur (0.0015% sulfur by weight), except that any existing distillate fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 C.F.R. § 60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each generator. [40 C.F.R. § 60.4209(a)]

(4) Operation and Maintenance Requirements

Each generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Cutler that are approved by the engine manufacturer. Cutler may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

(5) Annual Time Limit for Maintenance and Testing

Each generator shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supplying power as part of a financial arrangement with another entity unless the conditions in § 60.4211(f)(3)(i) are met). [40 C.F.R. § 60.4211(f)]

(6) Initial Notification Requirement

No initial notification is required for emergency engines. [40 C.F.R. § 60.4214(b)]

(7) Recordkeeping

Cutler shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours of emergency operation, including what classified the operation as emergency, and the number of hours of non-emergency operation. If the generators are operated during a period of demand response or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in § 60.4211(f)(3)(i), Cutler shall keep records of the notification of the emergency situation, and the date, start time, and end time of each generator operation for these purposes. [40 C.F.R. § 60.4214(b)]

- (8) *Annual Reporting Requirements* for Demand Response Availability Over 15 Hours Per Year (for generators greater than 100 brake hp)
If Cutler operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in § 60.4211(f)(3)(i), the facility shall submit an annual report containing the information in § 60.4214(d)(1)(i) through (vii). The annual report for each calendar year must be submitted no later than March 31st of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI), accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

[40 C.F.R. § 60.4214(d)]

At the time of annual report submittal to the EPA, Cutler shall also submit to the Department a copy of each annual report required above.
[06-096 C.M.R. ch. 140, BPT]

The NSPS regulation at 40 C.F.R. § 60.4208(a) identifies other, additional requirements for owners and operators of engines subject to Subpart III, restricting what model year engines may be installed by the owner/operator after certain dates according to engine size. As per this section, after December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) which do not meet the applicable requirements for 2007 model year engines. However, part (i) of the same section states the following: "The requirements of this section do not apply to ... engines that were removed from one existing location and reinstalled at a new location."

The Department considers that each of these MUSE units was removed from an existing location (wherever the MUSE program had them located) and reinstalled at the Cutler facility, and thus not subject to these additional restrictions, per 40 C.F.R. § 60.4208(i).

4. National Emission Standards for Hazardous Air Pollutants (NESHAP)

Reciprocating internal combustion engines are subject to both state and federal standards and limits. Federal regulation 40 C.F.R. Part 63, Subpart ZZZZ does not have an applicability threshold based on engine size; thus, industrial engines of all sizes are subject to the Subpart. The only RICE that are exempt from Subpart ZZZZ requirements are existing emergency engines located at residential, institutional, or commercial area sources, as defined in the Subpart.

a. Fire Pump Engine #VLF-123-01, MUSE Engines

By meeting the requirements of 40 C.F.R. Part 60, Subpart III, Unit #VLF-123-01 and the MUSE Engines also meet the applicable requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590 (c)(1)]

b. Emergency Generators #VLF-135-01, #VLF-130-01, and #VLF-503-01

Units at the Cutler facility which are not subject to NSPS regulations are considered existing, emergency, stationary reciprocating internal combustion engines at an area HAP source. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt these units from the federal requirements.

Units #VLF-135-01, #VLF-130-01, and #VLF-503-01 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore classified as existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to requirements applicable to non-emergency engines.

c. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) *Operation and Maintenance Requirements*

Operating Limitations (40 CFR §63.6603(a) and Table 2(d))	
Spark Ignition Units: (natural gas, propane) #VLF-135-01, #VLF-130-01, and #VLF-503-01	<ul style="list-style-type: none"> - Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or Cutler shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each generator. [40 C.F.R. § 63.6625(f)]

(3) Startup Idle and Startup Time Minimization Requirements

During periods of startup, Cutler must minimize each engine's idling time and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ, Table 2d]

(4) Annual Time Limit for Maintenance and Testing

The engines shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations. This does not include peak shaving, non-emergency demand response, or to generate income for the facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in § 63.6640(f)(4)(ii) are met. [40 C.F.R. § 63.6640(f)]

(5) Recordkeeping

Cutler shall keep records that document maintenance conducted on each engine and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number hours of emergency operation, including what classified the situation as emergency, and the number of hours of non-emergency operation. If an engine is operated during a period of demand response or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), Cutler shall keep records of the notification of the emergency situation and the date, start time, and end time of engine operation for these purposes. [40 C.F.R. § 63.6655(e) and (f)]

5. BACT/BPT Findings

The BACT/BPT emission limits for the two natural gas fired units, VLF-135-01 and VLF-503-01; and the distillate fuel-fired unit, VLF-123-01, are based on the following:

Pollutant	Units Firing Natural Gas		Units Firing Distillate Fuel	
	Emission Factor, lb/MMBtu	Source of Factor	Emission Factor, lb/MMBtu	Source of Factor
PM, PM ₁₀ , PM _{2.5}	0.01	AP-42 Table 3.3-2 (7/2000)	0.31	AP-42 Table 3.3-1 (10/96)
SO ₂	0.000588		0.0015	based on firing 15 ppm sulfur fuel
NO _x	4.08		4.41	AP-42, Table 3.3-1 (10/96)
CO	0.317		0.95	AP-42, Table 3.3-1 (10/96)
VOC	0.118		0.36	
Visible Emissions	N/A	06-096 C.M.R. ch. 101	N/A	06-096 C.M.R. ch. 101

The BACT/BPT emission limits for the MUSE engines, each of which has an output capacity *greater than* 431 kW (600 hp) are based on the following:

Pollutant	Emission Factor	Source of Factor
PM, PM ₁₀ , PM _{2.5}	6.6 lb/1000 gal	Manufacturer Data
	0.12 lb/MMBtu	06-096 CMR 103 ³
SO ₂	0.0015 lb/MMBtu	based on firing 15 ppm sulfur fuel (0.0015% sulfur by weight)
NO _x	227 lb/1000 gal	Manufacturer Data
CO	15.7 lb/1000 gal	
VOC	0.09 lb/MMBtu	AP-42 Table 3.4-1 (10/96)
Visible Emissions	N/A	06-096 C.M.R. ch. 101 (2)(B)(1)(d)

Emissions from these emergency units shall not exceed the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
VLF-135-01	0.005	0.005	0.005	0.0003	2.04	0.16	0.06
VLF-503-01	0.008	0.008	0.008	0.0005	3.3	0.25	0.09
VLF-123-01 (Fire Pump)	0.25	0.25	0.25	0.0012	3.53	0.76	0.29
Each MUSE Unit	0.38	0.38	0.38	0.01	13.0	0.90	0.74

³ This limit is applicable, but data provided by the manufacturer results in lower emissions, as follows: (6.6 lb/1000 gal) x (1 gal/0.137 MMBtu) = 0.048 lb/MMBtu. Thus, the manufacturer's emissions value is used in this instance.

Visible emissions from each distillate fuel-fired emergency engine shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

Visible emissions from each natural gas-fired emergency engine shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three hour period.

E. MUSE Engines Fuel Storage Tank

The fuel storage tank identified in the following table has capacity greater than the licensing threshold level of 10,000 gallons. This is an above-ground tank.

Tank ID	Capacity (gallons)	Material Stored	Tank Type	Tank Size (dimensions in ft)	Installation Year
MUSE Tank #1	16,890 (63.94 m ³)	Distillate Fuel	Double-walled steel	8 (wide) x 40 (long) x 9.5 (tall)	2013

1. NSPS: 40 C.F.R. Part 60, Subpart Kb

Federal NSPS regulation *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*, 40 C.F.R. Part 60, Subpart Kb, applies to such storage vessels with a capacity greater than or equal to 75 cubic meters; thus, this tank is not subject to this Subpart. [40 C.F.R. Part 60, Subpart Kb, § 60.110b(a)]

2. Maine Rule *Petroleum Liquid Storage Vapor Control*, 06-096 C.M.R. ch. 111

This tank is not subject to this rule, since the minimum tank size threshold for applicability is 39,000 gallons. [06-096 C.M.R. ch. 111 (1)(B) and (C)]

F. Parts Washer

A correction of the Parts Washer capacity was addressed in NSR license A-210-77-1-A (December 29, 2014). The capacity of the Building 103 main deck Parts Washer, identified in air emission license A-210-70-D-R (2012) as 30 gallons, is actually 2 gallons.

G. Facility Annual Emissions

1. Total Annual Emissions

The following total licensed annual emissions for the facility are based on the following fuel quantities. All usages are based on a 12-month rolling total.

- 240,900 gallons/year of distillate fuel, with a maximum sulfur content of 0.0015% by weight fired in B#7 and B#8 (combined).
- 2,504,221 gallons per year distillate fuel, with a maximum sulfur content of 0.0015% by weight, fired in in HF-401-D#5, VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, VLF-103-D#5, and VLF-103-D#6 (combined), per A-210-70-D-R (June 19, 2012).
- 100 hours/year of operation for each emergency engine (non-emergency operation hours).

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers B#7 and B#8	1.6	1.6	0.1	2.4	0.6	0.1
Boiler #15	0.2	0.2	5.7	1.7	0.4	0.03
Non-Emergency Engines	34.6	34.6	8.8	552.9	146.9	17.3
Emergency Engines						
VLF-135-01	0.1	0.1	negligible	0.4	0.1	0.1
VLF-503-01						
VLF 123-01						
MUSE Engines	0.3	0.3	0.3	0.01	0.5	0.2
Total TPY	36.8	36.8	14.9	557.4	148.5	17.7

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limit;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

In support of NSR license A-210-77-1-A (December 29, 2014), the Cutler facility submitted an ambient air quality analysis demonstrating that emissions from the facility, when operating in accordance with the modeled scenarios and in conjunction with all other sources, will not cause or contribute to a violation of any NAAQS for SO₂, PM₁₀, PM_{2.5}, NO₂, or CO. An additional ambient air quality analysis is not required for this Part 70 License Amendment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this source:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards; and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License Amendment A-210-70-G-A pursuant to 06-096 C.M.R. ch. 140 and the preconstruction permitting requirements of 06-096 C.M.R. ch. 115 and subject to the conditions found in Air Emission License A-210-70-D-R, in amendments A-210-70-E-A and A-210-70-F-A, and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This Part 70 License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

Special Condition (14) is hereby removed from Air Emission License A-210-70-D-R (June 19, 2012).

(14) **VLF-103-B#6**

Removed.

Special Condition (16) of Air Emission License A-210-70-D-R (June 19, 2012) shall be replaced with the following Specific Condition (16).

(16) **Non-Emergency Engines VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5**

- A. Fuel fired in the non-emergency engines VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 shall be ultra-low sulfur distillate fuel with a sulfur content not to exceed 0.0015% by weight. Compliance shall be demonstrated by supplier fuel records of quantities and sulfur content of each delivery.
- B. Emissions from each unit VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 shall not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority	Enforceability
PM	0.08	A-210-77-1-A (December 29, 2014), BACT	Federally Enforceable

Pollutant	lb/hour	Origin and Authority
PM	2.56	A-210-77-1-A (December 29, 2014), BACT
PM ₁₀	2.56	
PM _{2.5}	2.56	
SO ₂	0.05	A-210-70-B-A (3/18/2004), BACT/BPT
NO _x	102.4	
CO	27.2	A-210-70-B-A (3/18/2004) and
VOC	3.2	A-210-70-D-R (6/19/2012), BACT/BPT

- C. Visible emissions from each of the stacks serving VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 shall not exceed 20% opacity on a six-minute block average basis, except for two six-minute block averages in a three-hour period. [A-210-70-D-I (6/19/2012), BPT]

- D. At any one time, Cutler shall operate only one of the Units VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, or VLF-103-D#5 but not two or more concurrently, except during periods when one of the units is being brought off-line and another is being brought on-line. Operational records shall be maintained documenting compliance with this requirement.

The above limitation notwithstanding, Cutler may operate more than one of these units concurrently for short periods of time for emergency purposes (i.e., de-icing), but such concurrent operation shall not exceed 100 hours per year. Cutler shall document the reason for concurrent operation and the total number of hours that two or more units are operating concurrently in this emergency mode and make these records available upon request. [A-210-77-1-A (December 29, 2014), BPT]

Special Condition (20) is hereby removed from Air Emission License A-210-70-D-R (June 19, 2012).

(20) *Removed.*

Special Condition (22) of Air Emission License A-210-70-D-R (June 19, 2012) shall be replaced with the following Specific Condition (22).

(22) **Fuel Use**

A. *Removed.*

B. Combined fuel use in VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, VLF-103-D#5, VLF-103-D#6, and HF-401-D#5 shall not exceed 2,504,221 gallons per year of ultra-low sulfur (0.0015% by weight) distillate fuel based on a 12-month rolling total. Compliance with the fuel use limit shall be demonstrated by fuel use records kept on site. Compliance with the fuel sulfur content shall be demonstrated through purchase receipts indicating percent sulfur by weight.

[A-210-71-I-M (8/29/1997), BPT] Enforceable by State-only

C. Cutler shall not fire more than 133,000 gallons per year of low-sulfur (0.05% by weight) distillate fuel in VLF-103-D#6, based on a 12-month rolling total. Compliance with the fuel use limit shall be demonstrated by fuel use records kept on site. Compliance with the fuel sulfur content shall be demonstrated through purchase receipts indicating percent sulfur by weight.

[A-210-70-A-I (1/14/2002), BPT] Enforceable by State-only

The following are new specific conditions.

(35) **Boilers: VLF-103-B#7 (B#7), VLF-103-B#8 (B#8), and VLF-100-B#15 (Boiler #15)**

- A. Fuel fired in Boilers B#7 and B#8 shall be ultra-low sulfur distillate fuel with a sulfur content not to exceed 0.0015% by weight. [A-210-77-1-A (December 29, 2014), BACT]
- B. Prior to July 1, 2018, distillate fuel fired in Boiler #15 shall have a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 140, BPT/BACT]
- C. Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 140, BPT/BACT]
- D. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 140, BPT]
- E. At any one time, Cutler shall operate either Boiler B#7 or Boiler B#8 but not both, except during periods when one of the two is being taken off-line and the other is being brought on-line. The previous sentence notwithstanding, both boilers B#7 and B#8 are licensed to operate concurrently if none of the non-emergency generators VLF-103-D#2, VLF-103-D#3, VLF-103-D#4, and VLF-103-D#5 are in operation.

Operational records shall be maintained documenting compliance with this requirement. [A-210-77-1-A (December 29, 2014), BACT/BPT]

F. Emissions from these three boilers shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boilers B#7 and B#8	PM	0.12	06-096 C.M.R. ch. 103(2)(B)(1)(a)

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler B#7 (3.0 MMBtu/hr)	0.36	0.36	0.36	0.005	0.55	0.14	0.01
Boiler B#8 (3.0 MMBtu/hr)	0.36	0.36	0.36	0.005	0.55	0.14	0.01
Boiler #15 (2.6 MMBtu/hr)	0.04	0.04	0.04	0.004	0.38	0.09	0.006

- G. Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 C.M.R. ch. 101 (2)(B)(1)(b)]
- H. The quantity of distillate fuel fired in B#7 and B#8 combined shall not exceed 240,900 gallons/year. [06-096 C.M.R. ch. 140, BACT/BPT]
- I. Periodic monitoring for Boilers B#7, B#8, and #15 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used, the quantity of fuel used, and the sulfur content of the fuel.
- J. NESHAP: 40 C.F.R. Part 63, Subpart JJJJJ Requirements

1. Boiler Tune-Up Program

A boiler tune-up program shall be implemented in accordance with this Subpart, including the following requirements: [40 C.F.R. § 63.11210(f)]

- a. For B#7, B#8, and Boiler #15, a tune-up is required every five years. [40 C.F.R. § 63.11223(a) and Table 2]
- b. For each tune-up, a tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. Each report shall contain the concentration of CO in the effluent stream (ppmv) and of oxygen (volume percent), measured at high fire or typical operating load, both **before** and **after** the boiler tune-up; a description of any corrective actions taken as part of the tune-up of the boiler; and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 C.F.R. § 63.11223(b)(6)]

The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 C.F.R. § 63.11225(b)]

2. Boiler Tune-Up Requirements

Boiler tune-ups, conducted to demonstrate continuous compliance, shall be performed as specified below:

- a. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(1)]
- b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
- c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]
- d. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
- e. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, both **before** and **after** adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
- f. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

3. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following:

- a. Copies of notifications and reports with supporting compliance documentation;
- b. Identification of each boiler, the date of tune-up, tune-up procedures followed, and the manufacturer's specifications to which the boiler was tuned;
- c. Documentation of fuel type(s) used monthly by each boiler;

- d. The occurrence and duration of each malfunction of the boiler;
- e. Actions taken during periods of malfunction to minimize emissions and to restore the malfunctioning boiler to its usual manner of operation.

Records shall be in a form suitable and readily available for expeditious review. [40 C.F.R. § 63.11225(c)]

(36) Emergency Engines VLF-130-01, VLF-135-01, VLF-503-01, and VLF-123-01

A. The distillate fuel sulfur content for Emergency Engine VLF-123-01 shall not exceed 0.0015% by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [A-210-77-1-A (December 29, 2014), BPT]

B. Emissions shall not exceed the following [A-210-77-1-A (December 29, 2014), BACT/BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
VLF-135-01 0.5 MMBtu/hour, natural gas	0.005	0.005	0.005	0.0003	2.04	0.16	0.06
VLF-503-01 0.8 MMBtu/hour, natural gas	0.008	0.008	0.008	0.0005	3.3	0.25	0.09
VLF-123-01 0.8 MMBtu/hour, distillate fuel	0.25	0.25	0.25	0.0012	3.53	0.76	0.29

C. Visible Emissions [06-096 C.M.R. ch. 101]

1. Visible emissions from each of the natural gas-fired emergency engines shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three hour period.
2. Visible emissions from the distillate fuel-fired engine VLF-123-01 shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a three-hour period.

D. Fire Pump VLF-123-01: NSPS and Previously Licensed Requirements

The Fire Pump unit VLF-123-01 shall meet the following requirements, including the applicable requirements of 40 C.F.R. Part 60, Subpart IIII:

1. Manufacturer Certification Requirements

The engine shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

2. Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur by weight). Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 C.F.R. § 60.4207(b) and A-210-77-1-A (December 29, 2014), BPT]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on Fire Pump VLF-123-01. [40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

The engine shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). These limits are based on a 12-month rolling total. Compliance shall be demonstrated by records of all fire pump operating hours. [40 C.F.R. § 60.4211(f) and A-210-77-1-A (December 29, 2014), BPT]

5. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Cutler that are approved by the engine manufacturer. Cutler may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

E. Emergency Engines VLF-130-01, VLF-135-01, and VLF-503-01: NESHP Requirements

The Emergency Engines VLF-135-01 and VLF-503-01 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. Operational Limitations

Cutler shall meet the following operational limitations for each of the spark ignition (natural gas or propane fired) emergency engines:

- a. Change the oil and filter annually,
- b. Inspect the spark plugs annually, and
- c. Inspect the hoses and belts annually and replace as necessary.

A log shall be maintained documenting compliance with the operational limitations. [40 C.F.R. § 63.6603(a) and Table 2(d); and A-210-77-1-A (December 29, 2014), BPT]

2. Non-Resetable Hour Meter

A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 63.6625(f)]

3. Operation and Maintenance

The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or Cutler shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

4. Startup Requirements

During periods of startup, the facility must minimize each engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ, Table 2d]

5. Annual Time Limit for Maintenance and Testing

Each engine shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in § 63.6640(f)(4)(ii) are met). [40 C.F.R. § 63.6640(f)]

6. Recordkeeping

Cutler shall keep records that include maintenance conducted on each engine and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number hours of emergency operation, including what classified the situation as emergency, and the number of hours of non-emergency operation. For an engine operated during a period of demand response or to supply power

during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), Cutler shall keep records of the notification of the emergency situation and the date, start time, and end time of engine operation for these purposes. [40 C.F.R. § 63.6655(e) and (f)]

(37) **Emergency MUSE Engines**

- A. Cutler is licensed to operate up to 14 back-up, emergency MUSE engines in support of the full and necessary function of the Cutler facility. [A-210-77-2-A (August 1, 2014), BPT]
- B. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [A-210-77-2-A (August 1, 2014), BPT]
- C. These back-up, emergency MUSE engines shall only be used if primary generator power is unavailable. [A-210-77-2-A (August 1, 2014), BPT]

Emissions from **each** of the MUSE engines shall not exceed the following [06-096 C.M.R. ch. 103 and A-210-77-2-A (August 1, 2014), BPT]:

PM (lb/MMBtu)	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
0.12	0.38	0.38	0.38	0.01	13.0	0.90	0.74

- D. Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period. [06-096 C.M.R. ch. 101]
- E. The Emergency Generators shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following:
 - 1. Manufacturer Certification
The generators shall be certified by the manufacturer as meeting the emission standards for new non-road compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]
 - 2. Ultra-Low Sulfur Fuel
The distillate fuel fired in the generators shall not exceed 15 ppm sulfur (0.0015% sulfur by weight), except that any existing distillate fuel

purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 C.F.R. § 60.4207(b)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on each generator. [40 C.F.R. § 60.4209(a)]

4. Operation and Maintenance

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Cutler that are approved by the engine manufacturer. Cutler may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

5. Annual Time Limit for Maintenance and Testing

Each emergency generator shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations. This does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supplying power as part of a financial arrangement with another entity unless the conditions in § 60.4211(f)(3)(i) are met. [40 C.F.R. § 60.4211(f)]

6. Recordkeeping

Cutler shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours of emergency operation, including what classified the operation as emergency, and the number of hours of non-emergency operation. If the generators are operated during a period of demand response or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in § 60.4211(f)(3)(i), Cutler shall keep records of the notification of the emergency situation, and the date, start time, and end time of each generator operation for these purposes. [40 C.F.R. § 60.4214(b)]

7. Annual Reporting for Demand Response Availability Over 15 Hours/Year

If Cutler operates or is contractually obligated to have any generator greater than 100 brake hp available for more than 15 hours per calendar year in a demand response program or to supply power during a non-emergency situation as part of a financial arrangement with another

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entity as specified in § 60.4211(f)(3)(i), the facility shall submit an annual report containing the information in § 60.4214(d)(1)(i) through (vii). The annual report for each calendar year must be submitted no later than March 31st of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI), accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

[40 CFR §60.4214(d)]

At the time of annual report submittal to the EPA, Cutler shall also submit to the Department a copy of each annual report required above. [A-210-77-2-A (August 1, 2014), BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 21 DAY OF October, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-210-70-D-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: July 30, 2015

Date of application acceptance: July 31, 2015

Date filed with the Board of Environmental Protection:

This Order prepared by Jane E. Gilbert, Bureau of Air Quality.

