

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR



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**Midcoast Regional
Redevelopment Authority
DbA: Brunswick Landing
Cumberland County
Brunswick, Maine
A-1049-71-A-N/T (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
New Source / Transfer**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Midcoast Regional Redevelopment Authority, doing business as Brunswick Landing, has applied for a new Air Emission License permitting the use of air emission equipment that is being transferred from the License previously held by US Department of the Navy (US Navy) at Naval Air Station Brunswick (A-268-71-AA-R).

The main address for this facility is 2 Pegasus Street, Suite 1, Unit 200, Brunswick, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boiler and Heaters

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Stack #
Hangar 5, Boiler #1	5.0	35.7 gal/hr 4854 scf/hr	#1 and #2 Fuel Oil, Natural Gas	11
Hangar 5, Boiler #2	5.0	35.7 gal/hr 4854 scf/hr	#1 and #2 Fuel Oil, Natural Gas	11
Hangar 5, WH #1	1.0	7.1 gal/hr	#1 and #2 Fuel Oil	--
Hangar 6, Boiler #1	3.0	2,920 scf/hr	Natural Gas	17
Hangar 6, Boiler #2	3.0	2,920 scf/hr	Natural Gas	18
Hangar 6, Boiler #3	3.0	2,920 scf/hr	Natural Gas	19
Hangar 6, Make-up Unit #1	10.0	9,709 scf/hr	Natural Gas	n/a
Hangar 6, Make-up Unit #2	10.0	9,709 scf/hr	Natural Gas	n/a

UGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BUILDING., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

Hangar 6, Make-up Unit #3	2.06	2,000 scf/hr	Natural Gas	n/a
Hangar 6, Make-up Unit #4	2.06	2,000 scf/hr	Natural Gas	n/a
Building 25, WH #1	1.2	1165 scf/hr	Natural Gas	--
Building 54, Boiler #1	2.2	15.7 gal/hr	#1 and #2 Fuel Oil, Natural Gas	9
Building 86, Boiler #1	3.0	21.4 gal/hr 2912 scf/hr	#1 and #2 Fuel Oil, Natural Gas	14
Building 86, Boiler #2	3.0	21.4 gal/hr 2912 scf/hr	#1 and #2 Fuel Oil, Natural Gas	14
Building 86, Boiler #3	3.0	21.4 gal/hr 2912 scf/hr	#1 and #2 Fuel Oil, Natural Gas	14
Building 250, Boiler #1	6.0	42.9 gal/hr 5825 scf/hr	#1 and #2 Fuel Oil, Natural Gas	15
Building 250, Boiler #2	6.0	42.9 gal/hr 5825 scf/hr	#1 and #2 Fuel Oil, Natural Gas	15
Building 250, Boiler #3	6.0	42.9 gal/hr 5825 scf/hr	#1 and #2 Fuel Oil, Natural Gas	15
Building 250, Make-up Unit #1	2.75	2670 scf/hr	Natural Gas	--
Building 516, Boiler #1	1.9	13.6 gal/hr 1845 scf/hr	#1 and #2 Fuel Oil, Natural Gas	8

Electrical Generation Equipment

Equipment	Maximum Input Capacity MMBtu/hr	Maximum Firing Rate	Fuel Type
Hangar 5, Engine #58	3.1	22.9	Diesel @ 0.0015%S
Hangar 6, Engine #53	2.7	2,574 scf/hr	Natural Gas
Building 86, Engine #31	0.8	5.7	Diesel @ 0.0015%S
Building 209, Engine #49	3.9	28.5	Diesel @ 0.0015%S
Building 231, Engine #57	4.9	4,760 scf/hr	Natural Gas
Building 250, Engine #47	8.8	64.1	Diesel @ 0.0015%S
Building 295, Engine #18-1	2.8	20.4	Diesel @ 0.0015%S
Building 295, Engine #18-2	2.8	20.4	Diesel @ 0.0015%S
Building 295, Engine #18-3	2.8	20.4	Diesel @ 0.0015%S
Building 295, Engine #18-4	2.8	20.4	Diesel @ 0.0015%S
Building 295, Engine #63	0.9	6.9	Diesel @ 0.0015%S
Building 537, Engine #46	0.8	5.7	Diesel @ 0.0015%S
Building 554, Engine #48	1.6	11.4	Diesel @ 0.0015%S
Engine #50 (spare)	3.1	22.8	Diesel @ 0.0015%S
Engine #52 (spare)	2.0	14.2	Diesel @ 0.0015%S
Engine #55 (spare)	0.7	5.8	Diesel @ 0.0015%S

In addition to the previously listed equipment, there is equipment that the US Department of the Navy still owns, with the intent of eventually transferring the units to Brunswick Landing. The equipment is as follows:

Boiler and Heaters

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Stack #
Building 102, Make-up Unit #1	1.5	1460 scf/hr	Natural Gas	--

Electrical Generation Equipment

Equipment	Maximum Input Capacity MMBtu/hr	Maximum Firing Rate	Fuel Type
Building 200, Engine #4	2.2	16.4	Diesel @ 0.0015%S
Building 201, Engine #59	2.4	17.8	Diesel @ 0.0015%S

Brunswick Landing will be responsible for these units once the Department receives documentation stating that the units have been legally transferred to Brunswick Landing.

In addition to the previously listed equipment, there is equipment that Brunswick Landing owns, but is operated by tenants who have entered into long-term leasing agreements with Brunswick Landing. The equipment is as follows:

Boiler and Heaters

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Stack #
Building 594, Boiler #1	1.5	10.7 gal/hr 1471 scf/hr	#1 and #2 Fuel Oil, Natural Gas	7
Building 594, Boiler #2	1.5	10.7 gal/hr 1471scf/hr	#1 and #2 Fuel Oil, Natural Gas	7

Electrical Generation Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Stack #
Building 594, Engine #26	2.9	21.4	Diesel @ 0.0015%S	
Building 594, Engine #27	2.2	16.4	Diesel @ 0.0015%S	

C. Application Classification

Brunswick Landing is applying for its first air emission license incorporating existing equipment that is being transferred from a previous Air Emissions

License held by the US Navy at the Naval Air Station Brunswick. The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the facility-wide annual fuel use limit and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. TRANSFER REQUIREMENTS

A. Title, Right, or Interest

In their application, Brunswick Landing submitted copies of the Economic Development Conveyance transferring the property from the US Navy to Brunswick Landing dated September 30, 2011. The parties have provided sufficient evidence of title, right or interest in the facility to allow the transfer of the facility's licenses.

B. Financial Capacity and Intent

Brunswick Landing states that they possess the financial capacity to operate the facility in compliance with this air emission license.

C. Technical Capacity and Intent

Brunswick Landing have summated personnel qualifications and experience which demonstrate the technical and environmental knowledge necessary to operate the facility in a manner that will comply with this Air Emission License.

D. Full Name and Address

The full name and address of the new owner is:

Midcoast Regional Redevelopment Authority
Db: Brunswick Landing
2 Pegasus Street, Suite 1, Unit 200
Brunswick, ME 04011

E. Certification

Brunswick Landing certifies that there will be no increase in air emissions beyond that provided for in the existing licenses, either in quantity or type.

III. BEST PRACTICAL TREATMENT (BPT)

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 *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as 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 emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers – Natural Gas – Hangar 6 Boilers #1 - #3

Brunswick Landing operates three boilers that fire only natural gas.

Boilers #1, #2 and #3, located in Hangar 6, are each rated at 3.0 MMBtu/hr and exhaust through separate stacks (stacks #17, #18 and #19).

Due to their size, they are not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Because the boilers fire only natural gas, they are not subject to the requirements in *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

The BPT emission limits for the boilers were based on the following:

PM/PM ₁₀	0.05 lb/MMBtu, previous BACT determination
SO ₂	0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
NO _x	100 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
CO	84 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
VOC	5.5 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)

The BPT pound/hour emission limits for the natural gas fired boilers are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 6 – Boilers #1	0.2	0.2	0.1	0.3	0.3	0.1
Hangar 6 – Boilers #2	0.2	0.2	0.1	0.3	0.3	0.1
Hangar 6 – Boilers #3	0.2	0.2	0.1	0.3	0.3	0.1

Per 06-096 CMR 101, *Visible Emission Regulation*, visible emissions from each of the boilers shall each not exceed 10% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three hour period.

The total natural gas use for the facility shall not exceed a total of 300,000,000 scf/year, based on a twelve-month rolling total. The natural gas fired in these boilers shall be included in the facility-wide total.

C. Make-Up Air Units – Natural Gas – Hangar 6 Make-Up Units #1 - #4, Building 25 WH #1, Building 102 Make-Up Unit #1, Building 250 Make-Up Unit #1

Brunswick Landing operates seven make-up units firing only natural gas throughout the complex. The units are rated 10 MMBTU/hr and under.

The BPT emission limits for the natural gas fired make-up unit were based on the following:

PM/PM ₁₀	0.05 lb/MMBtu, previous BACT determination
SO ₂	0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
NO _x	100 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
CO	84 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
VOC	5.5 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)

The BPT pound/hour emission limits for the natural gas fired make-up units are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 6, Make-up #1	0.5	0.5	0.1	1.0	0.8	0.1
Hangar 6, Make-up #2	0.5	0.5	0.1	1.0	0.8	0.1
Hangar 6, Make-up #3	0.1	0.1	0.1	0.2	0.2	0.1
Hangar 6, Make-up #4	0.1	0.1	0.1	0.2	0.2	0.1

Building 25, WH #1	0.1	0.1	0.1	0.1	0.1	0.1
Building 102, Make-up #1	0.1	0.1	0.1	0.2	0.1	0.1
Building 250, Make-up #1	0.1	0.1	0.1	0.3	0.2	0.1

Per 06-096 CMR 101, *Visible Emission Regulation*, visible emissions from the fugitive venting of the makeup air units shall each not exceed 10% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three hour period.

The total natural gas use for the facility shall not exceed a total of 300,000,000 scf/year, based on a twelve-month rolling total. The natural gas fired in these make-up units shall be included in the facility-wide total.

D. Multi-fuel Fired Boilers/Units – Hangar 5 Boilers #1 - #2 & WH #1, Building 54 Boiler #1, Building 86 Boilers #1 - #3, Building 250 Boilers #1 - #3, Building 516 Boiler #1, Building 594 Boilers #1 and #2

Brunswick Landing operates thirteen multi-fuel firing boilers/units throughout the complex. The multi-fuel firing boilers/units are permitted to fire #1 fuel oil (kerosene), #2 fuel oil and natural gas.

None of the multi-fuel firing boilers/units are rated above 10 MMBtu/hr. Therefore, none of the units are subject to the NSPS, 40 CFR Part 60, Subpart Dc, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

The emission limits for the multi-fuel boilers/units are based on the following:

While firing either #1 or #2 fuel oil:

PM/PM ₁₀	0.08 lb/MMBtu, previous BACT determination
SO ₂	0.5 lb/MMBtu, firing ASTM D396 #2 fuel oil (0.5% sulfur)
NO _x	0.3 lb/MMBtu, previous BACT determination
CO	5 lb/1000 gal, AP-42, Table 1.3-1, dated 5/10
VOC	0.2 lb/1000 gal, AP-42, Table 1.3-3, dated 5/10

Although the boilers/units are capable of firing #1 and #2 fuel oil, the pound/hour limits were conservatively based upon firing #2 oil. The BPT pound/hour emission limits for the boilers/units firing fuel oil are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Boiler #1	0.4	0.4	2.5	1.5	0.2	0.1
Hangar 5, Boiler #2	0.4	0.4	2.5	1.5	0.2	0.1
Hangar 5, WH #1	0.1	0.1	0.5	0.3	0.1	0.1

Building 54, Boiler #1	0.2	0.2	1.1	0.7	0.1	0.1
Building 86, Boiler #1	0.2	0.2	1.5	0.9	0.1	0.1
Building 86, Boiler #2	0.2	0.2	1.5	0.9	0.1	0.1
Building 86, Boiler #3	0.2	0.2	1.5	0.9	0.1	0.1
Building 250, Boiler #1	0.5	0.5	3.0	1.8	0.2	0.1
Building 250, Boiler #2	0.5	0.5	3.0	1.8	0.2	0.1
Building 250, Boiler #3	0.5	0.5	3.0	1.8	0.2	0.1
Building 516, Boiler #1	0.2	0.2	1.0	0.6	0.1	0.1
Building 594, Boiler #1	0.1	0.1	0.8	0.5	0.1	0.1
Building 594, Boiler #2	0.1	0.1	0.8	0.5	0.1	0.1

Per 06-096 CMR 101, *Visible Emission Regulation*, when firing fuel oil, visible emissions from each boiler stack shall not exceed 20% on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period.

While firing natural gas:

PM/PM ₁₀	0.05 lb/MMBtu, previous BACT determination
SO ₂	0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
NO _x	100 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
CO	84 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
VOC	5.5 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)

The BPT pound/hour emission limits for the boilers/units firing natural gas are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Boiler #1	0.3	0.3	0.1	0.5	0.4	0.1
Hangar 5, Boiler #2	0.3	0.3	0.1	0.5	0.4	0.1
Building 54, Boiler #1	0.1	0.1	0.1	0.2	0.2	0.1
Building 86, Boiler #1	0.2	0.2	0.1	0.3	0.2	0.1
Building 86, Boiler #2	0.2	0.2	0.1	0.3	0.2	0.1
Building 86, Boiler #3	0.2	0.2	0.1	0.3	0.2	0.1
Building 250, Boiler #1	0.3	0.3	0.1	0.6	0.5	0.1
Building 250, Boiler #2	0.3	0.3	0.1	0.6	0.5	0.1
Building 250, Boiler #3	0.3	0.3	0.1	0.6	0.5	0.1
Building 516, Boiler #1	0.1	0.1	0.1	0.2	0.2	0.1
Building 594, Boiler #1	0.1	0.1	0.1	0.2	0.1	0.1
Building 594, Boiler #2	0.1	0.1	0.1	0.2	0.1	0.1

Per 06-096 CMR 101, *Visible Emission Regulation*, when firing natural gas, visible emissions from each boiler/unit shall not exceed 10% on a six-minute block average basis, except for no more than one six-minute block averages in a continuous three-hour period.

The total natural gas use for the facility shall not exceed a total of 300,000,000 scf/year and the total #1 or #2 fuel oil use for the facility shall not exceed 1,000,000 gallons/year, both limits based on a twelve-month rolling total. The natural gas and fuel oil fired in these boilers/units shall be included in the facility-wide total.

Prior to January 1, 2016, when firing either #1 or #2 fuel oil in any of the multi-fuel firing boilers/units, the boiler/units shall fire ASTM D396 compliant #1 or #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016, the #1 or #2 fuel oil fired in any multi-fuel boiler/unit shall have a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the #1 or #2 fuel oil fired in any multi-fuel boiler/unit shall have a maximum sulfur content limit of 0.0015% by weight (15 ppm).

The multi-fuel firing boilers/unit may be subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The boilers/unit are existing units each rated under 10 MMBtu/hr and are thus not subject to PM, CO, or mercury emission limits from 40 CFR Part 63 Subpart JJJJJ.

If any multi-fuel firing boilers/units are operated solely as gas-fired boilers, they will not be subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63, Subpart JJJJJ). [40 CFR § 63.11195 (e)] A gas-fired boiler is defined by this Subpart as follows:

“any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing firing liquid fuel shall not exceed a combined total of 48-hours during any calendar year.” [40 CFR § 63.11237]

Operation of any multi-fuel firing boilers/units outside of these parameters may trigger applicability of 40 CFR Part 63, Subpart JJJJJ. Records shall be

maintained to document operation as gas-fired boilers/units, as defined, or as otherwise in compliance with the applicable provisions of Subpart JJJJJ.

Should the multi-fuel firing boilers/units be subject to 40 CFR Part 63, Subpart JJJJJ, for informational purposes, a summary of the currently applicable federal requirements is listed below. At this time, the Maine Department of Environmental Protection has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however Brunswick Landing is still subject to the requirements. 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

i. Initial Notification of Compliance

An Initial Notification submittal to EPA is due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]

ii. Boiler Tune-Up Program

(a) A boiler tune-up program shall be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(1)]

(b) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. 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; however, the burner must be inspected at least once every 36 months. [40 CFR Part 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. [40 CFR Part 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]

5. 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 CFR Part 63.11223(b)(5)]
 6. 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 CFR Part 63.11223(b)(7)]
- (c) After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- (d) The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report (called a Notification of Compliance Status) has been submitted.
1. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i>	
• Seasonal (see definition §63.11237)	Every 5 years
• Limited use (see definition §63.11237)	Every 5 years
• With a heat input capacity of <5MMBtu/hr	Every 5 years
• Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, 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 CFR Part 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 CFR Part 63.11225(b)]

E. Emergency Electrical Generating Equipment (excludes Engine #63)

Brunswick Landing operates eighteen back-up diesel generators and two natural gas fired back-up generators (Engine #53, located in Hangar 6 and Engine #57, located in Building 231).

All generators, with the exception of Engine #63, were manufactured prior to 2005. The generators are therefore considered to be existing emergency engines located at an area source of Hazardous Air Pollutants.

The BPT emission limits for the generators are based on the following:

Diesel fired generators:

PM/PM ₁₀	0.12 lb/MMBtu, previous BACT determination
SO ₂	0.0015 lb/MMBtu, firing 0.0015%S (15ppm) diesel fuel
NO _x	4.41 lb/MMBtu from AP-42, Table 3.3-1 (dated 10/96)
CO	0.95 lb/MMBtu from AP-42, Table 3.3-1 (dated 10/96)
VOC	0.36 lb/MMBtu from AP-42, Table 3.3-1 (dated 10/96)

Natural gas fired generators (Engines #53 and #57):

PM/PM ₁₀	0.05 lb/MMBtu, previous BACT determination
SO ₂	0.00058 lb/MMBtu: AP-42, Table 3.2-2 (dated 7/00)
NO _x	4.08 lb/MMBtu: AP-42, Table 3.2-2 (dated 7/00)
CO	0.317 lb/MMBtu: AP-42, Table 3.2-2 (dated 7/00)
VOC	0.118 lb/MMBtu: AP-42, Table 3.2-2 (dated 7/00)

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Engine #58	0.4	0.4	0.1	13.7	3.0	1.1
Hangar 6, Engine #53	0.1	0.1	0.1	11.0	0.9	0.3
Building 86, Engine #31	0.1	0.1	0.1	3.5	0.8	0.3
Building 200, Engine #4	0.3	0.3	0.1	9.7	2.1	0.8
Building 201, Engine #59	0.3	0.3	0.1	10.6	2.3	0.9
Building 209, Engine #49	0.5	0.5	0.1	17.2	3.7	1.4
Building 231, Engine #57	0.3	0.4	0.1	20.0	1.5	0.6
Building 250, Engine #47	1.1	1.1	0.1	28.2	7.5	0.8
Building 295, Engine #18-1	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-2	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-3	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-4	0.3	0.3	0.1	12.4	2.6	1.0
Building 537, Engine #46	0.1	0.1	0.1	3.5	0.8	0.3
Building 554, Engine #48	0.2	0.2	0.1	7.1	1.5	0.6
Building 594, Engine #26	0.4	0.4	0.1	12.8	2.8	1.0
Building 594, Engine #27	0.3	0.3	0.1	9.7	2.1	0.8
Engine #50 (spare)	0.4	0.4	0.1	13.7	3.0	1.1
Engine #52 (spare)	0.2	0.2	0.1	8.8	1.9	0.7
Engine #55 (spare)	0.1	0.1	0.1	3.1	0.7	0.3

Visible emissions from each diesel generator stack shall not exceed 20% on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period.

The total facility-wide fuel usage for the emergency generators shall not exceed a total of 3,750,000 scf/year of natural gas and 50,000 gallons/year of 0.0015%S diesel fuel, both limits based on a twelve-month rolling totals. The natural gas and/or diesel fuel fired in these engine shall be included in the facility-wide total.

The emergency generators shall each be limited to 500 hours of operation per year, based on a twelve-month rolling total. Compliance shall be demonstrated by maintaining a written log of all generator operating hours.

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to the emergency generators listed above. Since the generators were manufactured prior to 2005, they are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source and are not subject to New Source Performance Standards regulations. 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.

Emergency Definition:

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE 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, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
 - (i) 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 RICE beyond 100 hours per calendar year.
 - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Paragraphs (1) and (2) above notwithstanding, emergency stationary RICE 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 for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) 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 provided in the following paragraphs:

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution center.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

a. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

b. 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.

c. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC,

regional, state, public utility commission or local standards or guidelines.

- d. The power is provided only to the facility itself or to support the local transmission and distribution system.
- e. 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.

40 CFR Part 63, Subpart ZZZZ Requirements:

	Compliance Dates	Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))
Compression ignition (diesel, fuel oil) units	No later than May 3, 2013	<ul style="list-style-type: none"> - Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner 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.
Spark ignition (natural gas, propane) units	No later than October 19, 2013	<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.

* Note: Due to the 500 hour operation limit on each generator, the inspections and oil/filter changes shall be performed annually to meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or Brunswick Landing shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

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

During periods of startup the facility must minimize the 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, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

The generators 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 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 CFR §63.6640(f)]

Brunswick Landing shall keep records that include maintenance conducted on all generators and the hours of operation of each engines recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the Brunswick Landing must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

F. Emergency Electrical Generating Equipment (Engine #63)

Engine #63 was manufactured after April 1, 2006, therefore, Engine #63 is subject to New Source Performance Standards 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

The emission limits for Engine #63 are based on the following:

PM/PM ₁₀	0.12 lb/MMBtu, previous BACT determination
SO ₂	0.0015 lb/MMBtu, firing 0.0015%S (15ppm) diesel fuel
NO _x	3.2 lb/MMBtu from AP-42, Table 3.4-1 (dated 10/96)

CO	0.85 lb/MMBtu from AP-42, Table 3.4-1 (dated 10/96)
VOC	0.09 lb/MMBtu from AP-42, Table 3.4-1 (dated 10/96)
Opacity	Visible emissions from the diesel generator stack shall not exceed 20% on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period.

The total facility-wide fuel usage for the emergency generators shall not exceed 50,000 gallons/year of 0.0015%S diesel fuel, based on a twelve-month rolling totals. The diesel fuel fired in Engine #63 shall be included in the facility-wide total.

Engine #63 shall be limited to 100 hours per year of operation for maintenance checks and readiness testing. Engine #63 shall be limited to 500 hours per year of total emergency operation. Both of these limits are based on a twelve-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.

40 CFR Part 60, Subpart IIII [*if diesel*]

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the emergency generators listed above since the units were ordered after July 11, 2005 and manufactured after April 1, 2006. By meeting the requirements of Subpart IIII, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

Emergency Definition:

Emergency stationary ICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) 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, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) Paragraph (1) above notwithstanding, the emergency stationary ICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:

(i) 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.

(ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Paragraphs (1) and (2) 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 for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) 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:

- (i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
- (ii) 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.
- (iii) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (iv) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (v) 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.

[40 CFR §60.4211(f) and §60.4219]

40 CFR Part 60, Subpart III Requirements:

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

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

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

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Brunswick Landing that are approved by the engine manufacturer. Brunswick Landing may only change those emission-

related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

The generators 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 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 §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

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

G. Annual Emissions

Emissions for the boilers and heaters were based on the worst-case scenario of 300,000,000 scf/year of natural gas and 1,000,000 gallons/year of ASTM D396 #1 and #2 fuel oil combined.

Emissions for the diesel engines were based on the worst-case scenario of 3,750,000 scf/year of natural gas and 50,000 gallons/year of 0.0015%S (15ppm) diesel fuel.

Brunswick Landing shall be restricted to the following annual emissions, based on a twelve-month rolling total:

Total Licensed Annual Emissions for the Facility - Tons/year
(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler, Heaters and Make-Up Units	13.3	13.3	35.4	36.0	15.1	0.8
Diesel Engines	0.5	0.5	0.2	23.0	3.9	1.4
Engines #53 & #57 (Natural Gas)	0.2	0.2	0.1	6.5	1.0	0.2
Total TPY	14.0	14.0	35.7	65.5	20.0	2.4

IV. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor source shall be determined on a case-by-case basis. Based on the information available in the file, results of previous dispersion modeling conducted by the US

Navy in 1999 (Brunswick Naval Air Station license A-268-71-P-A), the intermittent operation of the emergency generators and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

Based on the above, the Department concludes that the applicant for the air emission license transfer has the capacity to satisfy all applicable statutory criteria and hereby APPROVES the transfer of the equipment from the US Navy to the Midcoast Regional Redevelopment Authority, subject to all conditions attached to them.

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

- will receive BPT,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1049-71-A-N/T(SM) subject to the following conditions.

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

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen months after receipt of such approval or if

construction is discontinued for a period of eighteen months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty days from date of test completion.
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to

a demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) Boilers - Natural Gas – Hangar 6, Boilers #1 - #3

- A. The natural gas fuel use for Boilers #1, #2 and #3 in Hangar #6 shall be included in the facility-wide limit. The total natural gas use for the facility shall not exceed a total of 300,000,000 scf/year, based on a twelve-month rolling total. Records of annual fuel use shall be kept on a monthly and a twelve-month rolling total basis. [06-096 CMR 115, BACT]
- B. Emissions from Boilers #1, #2 and #3 in Hangar #6 shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
Hangar 6 – Boilers #1 - #3	PM	0.05	06-096 CMR 103(2)(B)(1)(a), BACT

Building 102, Make-up #1*	0.1	0.1	0.1	0.2	0.1	0.1
Building 250, Make-up #1	0.1	0.1	0.1	0.3	0.2	0.1

* This equipment is currently owned by the US Department of the Navy, however, there are plans to transfer ownership of this equipment to Brunswick Landing. Requirements contained in this license associated with this equipment will become effective immediately upon completion of the transfer.

- D. Visible emissions from the natural gas units shall each not exceed 10% opacity on a six minute block average, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101]
- (18) **Multi-Fuel Units – Hangar 5 Boilers #1 - #2 & WH #1, Building 54 Boiler #1, Building 86 Boilers #1 - #3, Building 250 Boilers #1 - #3, Building 516 Boiler #1, Building 594 Boilers #1 and #2**

- A. The fuel use for the Multi-Fuel Units shall be included in the facility-wide limit. The total fuel use for the facility shall not exceed 300,000,000 scf/year of natural gas and 1,000,000 gallons/year of ASTM D396 #1 or #2 fuel oil, both based on a twelve-month rolling total. Records of annual fuel use shall be kept on a monthly and a twelve-month rolling total basis. [06-096 CMR 115, BACT]
- B. Records shall be maintained to document these Multi-Fuel Units as natural gas fired boilers, as defined at 40 CFR § 63.11237, or the facility shall comply with the requirements of 40 CFR Part 63, Subpart JJJJJ, as appropriate.
- C. In order to maintain status of ‘gas-fired units’ under 40 CFR Part 63 Subpart JJJJJ, periodic testing firing ASTM D396 #1 or #2 fuel oil shall not exceed a combined total of 48-hours during any calendar year.
- D. Emissions shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
All Multi-Fuel Boilers & WH Unit	PM	0.08 - fuel oil 0.05 - natural gas	06-096 CMR 103(2)(B)(1)(a), BACT

- E. When firing fuel oil, emissions shall not exceed the following [06-096 CMR 115, BACT]:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Boiler #1	0.4	0.4	2.5	1.5	0.2	0.1
Hangar 5, Boiler #2	0.4	0.4	2.5	1.5	0.2	0.1
Hangar 5, WH#1	0.1	0.1	0.5	0.3	0.01	0.1
Building 54, Boiler #1	0.2	0.2	1.1	0.7	0.1	0.1

Building 86, Boiler #1	0.2	0.2	1.5	0.9	0.1	0.1
Building 86, Boiler #2	0.2	0.2	1.5	0.9	0.1	0.1
Building 86, Boiler #3	0.2	0.2	1.5	0.9	0.1	0.1
Building 250, Boiler #1	0.5	0.5	3.0	1.8	0.2	0.1
Building 250, Boiler #2	0.5	0.5	3.0	1.8	0.2	0.1
Building 250, Boiler #3	0.5	0.5	3.0	1.8	0.2	0.1
Building 516, Boiler #1	0.2	0.2	1.0	0.6	0.1	0.1
Building 594, Boiler #1	0.1	0.1	0.8	0.5	0.1	0.1
Building 594, Boiler #2	0.1	0.1	0.8	0.5	0.1	0.1

F. When firing natural gas, emissions shall not exceed the following [06-096 CMR 115, BACT]:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Boiler #1	0.3	0.3	0.1	0.5	0.4	0.1
Hangar 5, Boiler #2	0.3	0.3	0.1	0.5	0.4	0.1
Building 54, Boiler #1	0.1	0.1	0.1	0.2	0.2	0.1
Building 86, Boiler #1	0.2	0.2	0.1	0.3	0.2	0.1
Building 86, Boiler #2	0.2	0.2	0.1	0.3	0.2	0.1
Building 86, Boiler #3	0.2	0.2	0.1	0.3	0.2	0.1
Building 250, Boiler #1	0.3	0.3	0.1	0.6	0.5	0.1
Building 250, Boiler #2	0.3	0.3	0.1	0.6	0.5	0.1
Building 250, Boiler #3	0.3	0.3	0.1	0.6	0.5	0.1
Building 516, Boiler #1	0.1	0.1	0.1	0.2	0.2	0.1
Building 594, Boiler #1	0.1	0.1	0.1	0.2	0.1	0.1
Building 594, Boiler #2	0.1	0.1	0.1	0.2	0.1	0.1

G. Visible emissions from any multi-fuel unit shall each not exceed 10% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101]

(19) Emergency Electrical Generating Equipment (excludes Engine #63)

A. The total facility-wide fuel usage for all emergency generators combined shall be limited to a total of 3,750,000 scf/year of natural gas and 50,000 gallons/year of 0.0015%S diesel fuel, both limits based on a twelve-month rolling totals. [06-096 CMR 115, BACT]

B. Within the facility-wide fuel limits established in condition 19A, Brunswick Landing shall not operate any emergency generator greater than 500 hours per year, on a twelve-month rolling total basis. A non-resettable hour meter shall be maintained and operated on each emergency generator. [06-096 CMR 115, BPT]

- C. Each emergency generator shall only be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The emergency generator shall not be used for prime power when reliable offsite power is available. A log shall be maintained documenting the date, time, and reason for operation. [06-096 CMR 115, BACT]
- D. Except for Engines #53 and #57, the emergency generators each shall fire only diesel fuel with a sulfur limit not to exceed 0.0015% by weight. Emergency Engines #53 and #57 shall fire only natural gas. Compliance shall be based on fuel records from the supplier showing the type of fuel delivered. [06-096 CMR 115, BACT]
- E. Emissions for the engines shall not exceed the following [06-096 CMR 115, BACT]:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hangar 5, Engine #58	0.4	0.4	0.1	13.7	3.0	1.1
Hangar 6, Engine #53	0.1	0.1	0.1	11.0	0.9	0.3
Building 86, Engine #31	0.1	0.1	0.1	3.5	0.8	0.3
Building 200, Engine #4*	0.3	0.3	0.1	9.7	2.1	0.8
Building 201, Engine #59*	0.3	0.3	0.1	10.6	2.3	0.9
Building 209, Engine #49	0.5	0.5	0.1	17.2	3.7	1.4
Building 231, Engine #57	0.3	0.4	0.1	20.0	1.5	0.6
Building 250, Engine #47	1.1	1.1	0.1	28.2	7.5	0.8
Building 295, Engine #18-1	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-2	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-3	0.3	0.3	0.1	12.4	2.6	1.0
Building 295, Engine #18-4	0.3	0.3	0.1	12.4	2.6	1.0
Building 537, Engine #46	0.1	0.1	0.1	3.5	0.8	0.3
Building 554, Engine #48	0.2	0.2	0.1	7.1	1.5	0.6
Building 594, Engine #26	0.4	0.4	0.1	12.8	2.8	1.0
Building 594, Engine #27	0.3	0.3	0.1	9.7	2.1	0.8
Engine #50 (spare)	0.4	0.4	0.1	13.7	3.0	1.1
Engine #52 (spare)	0.2	0.2	0.1	8.8	1.9	0.7
Engine #55 (spare)	0.1	0.1	0.1	3.1	0.7	0.3

* This equipment is currently owned by the US Department of the Navy, however, there are plans to transfer ownership of this equipment to Brunswick Landing. Requirements contained in this license associated with this equipment will become effective immediately upon completion of the transfer.

- F. Visible emissions from each emergency generator shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 CMR 101]
- G. All emergency generators shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including the following:
1. No later than May 3, 2013, Brunswick Landing shall meet the following operational limitations for each of the compression-ignition emergency generators (all emergency generators except Engine #53, Engine #57 and Engine #63):
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

A log shall be maintained documenting compliance with the operational limitations.

[40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 115]

2. No later than October 19, 2013, Brunswick Landing shall meet the following operational limitations for the spark ignition emergency generator (emergency generator Engines #53 and #57):
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

A log shall be maintained documenting compliance with the operational limitations.

[40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 115]

3. A non-resettable hour meter shall be installed and operated on each generator. [40 CFR §63.6625(f)]
4. Maintenance, Testing, and Non-Emergency Operating Situations
 - a. The generators 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 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 CFR §63.6640(f)]
 - b. Brunswick Landing shall keep records that include maintenance conducted on the all generators and the hours of operation of each engines recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), Brunswick Landing must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]
5. The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or Brunswick Landing shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

(20) Emergency Engine #63

- A. Engine #63 shall fire only diesel fuel with a sulfur limit not to exceed 0.0015%S by weight. Compliance shall be based on fuel records from the supplier. [40 CFR 60.4207(b), 06-096 CMR 115, BACT]

- B. Engine #63 shall be limited to 100 hours per year of operation for maintenance checks and readiness testing. Engine #63 shall also be limited to 500 hours per year of total operation. Both of these limits are based on a twelve-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR 60.4211(E) and 06-096 CMR 115, BACT]
- C. Any 0.0015%S diesel fuel fired in Engine #63 shall be included in the facility-wide limit of 20,000 gallons/year, on a twelve-month rolling totals. [06-096 CMR 115, BACT]
- D. Engine #63 shall be equipped with a non-resettable hour meter. [40 CFR 60.4209(a)]
- E. Emissions from Engine #63 shall not exceed the following [06-096 CMR 115, BACT]:

Equipment	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #63	0.1	0.1	0.1	4.0	0.9	0.3

- F. Visible emissions from Engine #63 shall not exceed 10% opacity on a six-minute block average, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 CMR 101]
- G. Engine #63 shall meet the applicable requirements of 40 CFR Part 60, Subpart III, including the following:
 - 1. The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]
 - 2. The generator 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 twelve-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
 - 3. The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures

developed by Brunswick Landing that are approved by the engine manufacturer. Brunswick Landing may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

- (21) In addition to the previously listed equipment, there is equipment that the US Department of the Navy still owns, with the intent of eventually transferring the units to Brunswick Landing. The equipment is as follows:

Boiler and Heaters

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Stack #
Building 102, Make-up Unit #1	1.5	1460 scf/hr	Natural Gas	--

Electrical Generation Equipment

Equipment	Maximum Input Capacity MMBtu/hr	Maximum Firing Rate	Fuel Type
Building 200, Engine #4	2.2	16.4	Diesel @ 0.0015%S
Building 201, Engine #59	2.4	17.8	Diesel @ 0.0015%S

Brunswick Landing will be responsible for these units once the Department receives documentation stating that the units have been legally transferred to Brunswick Landing.

(22) Annual Emission Statement

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), Brunswick Landing shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of either:

- 1) A computer program and accompanying instructions supplied by the Department; or
- 2) A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

Midcoast Regional
Redevelopment Authority
DbA: Brunswick Landing
Cumberland County
Brunswick, Maine
A-1049-71-A-N/T (SM)

Departmental
Findings of Fact and Order
Air Emission License
New Source / Transfer

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- (23) Brunswick Landing shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 27 DAY OF March, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/22/2010

Date of application acceptance: 1/14/2011

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J Ostrowski, Bureau of Air Quality.

