



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

AVERY T. DAY
ACTING COMMISSIONER

**City of Portland – Portland Arts and
Technology High School
Cumberland County
Portland, Maine
A-36-71-I-R**

**Departmental
Findings of Fact and Order
Air Emission License
Renewal**

FINDINGS OF FACT

After review of the air emission license renewal application, staff investigation reports and other documents in the applicant’s file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

City of Portland – Portland Arts and Technology High School (PATHS) has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

The equipment addressed in this license is located at 196 Allen Avenue, Portland, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Heating Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>
Boilers #1 and #2	8.0 (each)	7810 scf/hr	Natural Gas	1976
		56.9 gal/hr	Distillate Fuel, 0.5%	
Paint Booth #2 Heater	1.3	13.8 gal/hr	Propane	1991

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., 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 04769
(207) 764-0477 FAX: (207) 760-3143

Emergency Generators

Equipment	Maximum Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
Generator #1	1.4	10.4	Distillate fuel, 0.0015%	2006
Generator #2	1.0	10.3	Propane	1975

Process Equipment

Equipment	Production Rate	Pollution Control Equipment
Paint Booths #1-3	Variable	Particulate Filters
Woodworking Equipment	Variable	Dust Collector and Cyclone

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials 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

The application for PATHS does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). The facility is incapable of exceeding the major source thresholds for criteria pollutants and is considered a natural minor. The facility is incapable of exceeding the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

II. **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.

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 #1 and #2

PATHS operates Boilers #1 and #2 for steam and heat. Boilers #1 and #2 are both rated at 8.0 MMBtu/hr and are capable of firing either natural gas or distillate fuel at rates of 7810 scf/hr and 56.9 gal/hr, respectively. Boilers #1 and #2 both fire natural gas as a primary fuel except during periods of gas curtailment, gas supply interruptions, startups, or periodic testing on liquid fuel. Boilers #1 and #2 were both installed in 1976 and exhaust through a single 52-foot tall, 28-inch diameter stack.

1. BPT Findings

The BPT emission limits for Boilers #1 and #2 when firing distillate fuel were based on the following:

- PM/PM₁₀ – 0.08 lb/MMBtu based on 06-096 CMR 115, BPT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.5% by weight
- NO_x – 20 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
- CO – 5 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
- VOC – 0.34 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10
- Opacity – 06-096 CMR 101

The BPT emission limits for Boilers #1 and #2 when firing natural gas were based on the following:

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 CMR 115, BPT
- SO₂ – 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- NO_x – 100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- CO – 84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- VOC – 5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- Opacity – 06-096 CMR 101

The BPT emission limits for Boilers #1 and #2 are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Boilers #1 and #2 [each] Natural Gas	PM	0.05
Boilers #1 and #2 [each] Distillate Fuel	PM	0.08

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Boilers #1 and #2 [each] Natural Gas	0.40	0.40	0.01	0.78	0.65	0.04
Boilers #1 and #2 [each] Distillate Fuel	0.64	0.64	4.03	1.14	0.29	0.02

Visible emissions from Boilers #1 and #2 when firing natural gas shall not exceed 10 percent opacity on a 6-minute block average, except for no more than one (1) six (6) minute block average in a 3-hour period.

Visible emissions from Boilers #1 and #2 when firing distillate fuel shall not exceed 20 percent opacity on a 6-minute block average, except for no more than one (1) six (6) minute block average in a 3-hour period.

PATHS shall be limited to a heat input of 21,000 MMBtu/yr combined for Boilers #1 and #2 based on a calendar year total. Fuel use shall be converted to MMBtu on a monthly and calendar year basis using heating values of 0.00103 MMBtu/scf for natural gas and 0.14 MMBtu/gal for distillate fuel.

Fuel Sulfur Content Requirements

Prior to July 1, 2016, or by the date otherwise stated in 38 M.R.S.A. §603-A(2)(A)(3), the distillate fuel fired at PATHS in Boilers #1 and #2 shall have a maximum sulfur content of 0.5% by weight. Per 38 M.R.S.A. §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, distillate fuel fired at PATHS shall have a maximum sulfur content of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, distillate fuel fired at PATHS shall have a maximum sulfur content of 0.0015% by weight (15 ppm). The specific dates and requirements contained in this paragraph reflect the current dates and requirements in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates and requirements upon promulgation of the statute revision.

2. Periodic Monitoring

Periodic monitoring for Boilers #1 and #2 shall include recordkeeping to document fuel use both on a monthly and calendar year basis. Documentation shall include the type of fuel used and sulfur content of the fuel, if applicable.

3. 40 CFR Part 60, Subpart Dc

Due to their size and year of manufacture, Boilers #1 and #2 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.

4. 40 CFR Part 63, Subpart JJJJJ

Boilers #1 and #2 are not 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 units are considered existing gas-fired boilers rated less than 10 MMBtu/hr.

Gas-fired boilers are exempt from 40 CFR Part 63, Subpart JJJJJ. However, boilers which fire fuel oil are not. A “gas-fired boiler” is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR Part 63.11237]

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010 will be considered an existing boiler under this rule. A boiler which currently fires gaseous fuels, but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

C. Paint Booths #1-3 and Paint Booth #2 Heater

PATHS operates Paint Booths #1, #2, and #3. Paint Booths #1 and #2 are both DeVilbiss paint booths installed in 1991. They are both fitted with particulate filters to control overspray from the painting operations. Paint Booth #2 has an integrated propane heater with a maximum heat input capacity of 1.3 MMBtu/hr and heats the booth to approximately 160° Fahrenheit to aid in the paint and primer curing process. The Paint Booth #2 Heater fires propane at a rate of 13.8 gal/hr. Paint Booth #3 was installed in 2013 and was manufactured by Standard Tools and Equipment. Paint Booth #3 is fitted with paint arrestor particulate filters to control overspray from the painting operations. The filters for Paint Booths #1, #2, and #3 are changed approximately twice per year.

Miscellaneous high volume, low pressure spray guns are used in Paint Booths #1-3. The guns are rated at approximately 1.5 gal/min. PATHS uses approximately 16 gallons of paint and 6 gallons of primer per year. BPT for Paint Booths #1-3 is the operation, maintenance, and routine inspection of particulate filters and tracking of the VOC emissions from paint and primer used in the paint booths. VOC emissions from Paint Booths #1-3 shall not exceed the Process VOC limit of 0.1 tons/yr. BPT for visible emissions from the Paint Booth #1-3 filters is complying with 06-096 CMR 101, *Visible Emission Regulation*. Visible emissions from the Paint Booth #1-3 filters shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

1. BPT Findings

The BPT emission limits for the Paint Booth #2 Heater were based on the following:

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 CMR 115, BPT
- SO₂ – 0.018 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
and an average sulfur content of 0.18% by weight
- NO_x – 13 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
- CO – 7.5 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
- VOC – 1.0 lb/1000 gal based on AP-42, Table 1.5-1, dated 7/08
- Opacity – 06-096 CMR 101 or previous BACT

The BPT emission limits for the Paint Booth #2 Heater are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Paint Booth #2 Heater	0.07	0.07	0.01	0.19	0.11	0.01

Visible emissions from the Paint Booth #2 Heater shall not exceed 10 percent opacity on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

PATHS shall be limited to 30,000 gal/yr of propane for the Paint Booth #2 Heater.

2. Periodic Monitoring

Periodic monitoring for the Paint Booth #2 Heater shall include recordkeeping to document fuel use both on a monthly and calendar year total basis. Documentation shall include the type of fuel used.

3. 40 CFR Part 60, Subpart Dc

The Paint Booth #2 Heater does not heat water. It does not meet the definition of a “steam generating unit” and therefore is not subject to 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.

4. 40 CFR Part 63, Subpart JJJJJ

The Paint Booth #2 Heater does not heat water. It does not meet the definition of a “boiler” per 40 CFR Part 63.11237 and therefore is not subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

D. Generator #1

PATHS operates Generator #1 as an emergency generator. Generator #1 is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 1.4 MMBtu/hr which fires distillate fuel at a rate of 10.4 gal/hr. Generator #1 was manufactured in 2006.

1. BPT Findings

The BPT emission limits for Generator #1 are based on the following:

- PM/PM₁₀ - 0.12 lb/MMBtu from 06-096 CMR 103
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- 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 - 0.35 lb/MMBtu from AP-42 Table 3.3-1, dated 10/96
- Opacity - 06-096 CMR 101

The BPT emission limits for Generator #1 are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Generator #1	0.17	0.17	0.01	6.26	1.35	0.50

Visible emissions from Generator #1 shall not exceed 20 percent opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

2. 40 CFR Part 60, Subpart IIII

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

a. 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. There is no time limit on the use of emergency stationary ICE in emergency situations.
- (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]

b. 40 CFR Part 60, Subpart IIII Requirements:

(1) Manufacturer Certification Requirement

Generator #1 shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in Generator #1 shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise

obtained) prior to October 1, 2010, may be used until depleted.
[40 CFR §60.4207(b)]

(3) **Non-Resetable Hour Meter Requirement**

A non-resettable hour meter shall be installed and operated on Generator #1.
[40 CFR §60.4209(a)]

(4) **Operation and Maintenance Requirements**

Generator #1 shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by PATHS that are approved by the engine manufacturer. PATHS may only change those emission-related settings that are permitted by the manufacturer.
[40 CFR §60.4211(a)]

(5) **Annual Time Limit for Maintenance and Testing**

As an emergency engine, Generator #1 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 §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

(6) **Initial Notification Requirement**

No initial notification is required for Generator #1. [40 CFR §60.4214(b)]

(7) **Recordkeeping**

PATHS shall keep records that include maintenance conducted on Generator #1 and the hours of operation of Generator #1 recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as an emergency and how many hours were spent for non-emergencies. If Generator #1 is operated during a period of demand response or deviation from standard voltage or frequency, 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), PATHS 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 CFR §60.4214(b)]

(8) **Annual Reporting Requirements for Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)**

If PATHS operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of

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 §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is 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:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

[40 CFR §60.4214(d)]

E. Generator #2

PATHS operates Generator #2 as an emergency generator. Generator #2 is a generator set consisting of an engine and an electrical generator. Generator #2 is rated at 1.0 MMBtu/hr and fires propane at a rate of 10.3 gal/hr. Generator #2 was manufactured in 1975.

1. BPT Findings

The BPT emission limits for Generator #2 are based on the following:

PM/PM₁₀ - 0.05 lb/MMBtu from 06-096 CMR 115, BPT
SO₂ - Santa Barbara County Air Pollution Control District,
Technical Information for SO_x Gaseous Emission Factors,
dated 1/97
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 - 0.35 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
Opacity - 06-096 CMR 101

Emission factors for NO_x, CO, and VOC are the factors for small diesel generators listed under AP-42, Table 3.3-1. This is because there are currently no AP-42 emission factors for propane fired generators. These emission factors represent a worst case basis.

The BPT emission limits for Generator #2 are the following:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Generator #2	0.05	0.05	0.02	4.28	0.92	0.34

Visible emissions from Generator #2 shall not exceed an opacity of 10 percent on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

Generator #2 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Generator #2 shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, PATHS shall keep records of the total hours of operation and the hours of emergency operation for each unit.

Generator #2 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #2 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is not applicable to Generator #2 listed above. Generator #2 is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source. However, it is considered exempt from the requirements of Subpart ZZZZ since it is categorized as a residential, commercial, or institutional emergency engine and it does not operate or is not contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of 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).

Operation of an emergency engine such that it exceeds 15 hours per calendar year in a demand response program, during a period of 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), would cause the

engine to be subject to 40 CFR Part 63, Subpart ZZZZ, and require compliance with all applicable requirements.

F. Woodworking Equipment

PATHS operates various pieces of Woodworking Equipment. Emissions from the Woodworking Equipment are collected by an exhaust system and sent to two dust collectors located just outside the woodworking area. The dust collectors then empty into cyclones which empty into 55-gallon drums. The drums are sent to a landfill approximately once per week.

BPT for the Woodworking Equipment is the operation, maintenance, and routine inspection of the dust collectors and cyclones associated with the equipment. BPT for visible emissions from the Woodworking Equipment dust collectors and cyclones is complying with 06-096 CMR 101, *Visible Emission Regulation*. Visible emissions from the Woodworking Equipment dust collectors and cyclones shall not exceed an opacity of 20 percent based on a 6-minute block average basis, except for no more than one (1) six (6) minute block during any 1-hour period.

G. Parts Washers

Parts Washers #1 and #2 both have design capacities of 30 gallons. Parts Washers #1 and #2 are subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended) and records shall be kept documenting compliance.

H. Annual Emissions

1. Total Annual Emissions

PATHS shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on a maximum heat input of 21,000 MMBtu/yr for Boilers #1 and #2 combined, 30,000 gal/yr of propane for the Paint Booth #2 Heater, and 100 hrs/yr non-emergency operating time for both Generator #1 and Generator #2:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers #1 and #2	0.8	0.8	5.3	1.5	0.9	0.1
Paint Booth #2 Heater	0.1	0.1	0.1	0.2	0.1	0.1
Generator #1	0.1	0.1	0.1	0.3	0.1	0.1
Generator #2	0.1	0.1	0.1	0.2	0.1	0.1
Process VOCs	-	-	-	-	-	0.1
Total TPY	1.1	1.1	5.6	2.2	1.2	0.5

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 limits and operating hours restrictions;
- 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

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

ORDER

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

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

The Department hereby grants Air Emission License A-36-71-I-R 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 (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) 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 (6) 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 (60) 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 (30) 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 (30) 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 emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) 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 #1 and #2

A. Fuel

1. Total fuel use for Boilers #1 and #2 combined shall not exceed 21,000 MMBtu/yr of heat input, based on a calendar year total basis. This is the equivalent of either 20.6 MMscf/yr of natural gas or 150,000 gal/yr of distillate fuel. [06-096 CMR 115, BPT]
2. Fuel use for Boilers #1 and #2 shall be converted to MMBtu on a monthly and calendar year basis using heating values of 0.00103 MMBtu/scf for natural gas and 0.14 MMBtu/gal for distillate fuel. [06-096 CMR 115, BPT]
3. Per the current dates and requirements of 38 M.R.S.A. §603-A(2)(A)(3), PATHS shall comply with the following statements; however, if the statute is revised, PATHS shall comply with the revised dates and requirements upon promulgation of the statute revision.
 - a. Prior to July 1, 2016, or the date specified in 38 M.R.S.A. §603-A(2)(A)(3), the distillate fuel fired at PATHS in Boilers #1 and #2 shall have a maximum sulfur content of 0.5% by weight. [06-096 CMR 115, BPT]
 - b. Beginning July 1, 2016, or on the date specified in 38 M.R.S.A. §603-A(2)(A)(3), the distillate fuel fired at PATHS in Boilers #1 and #2 shall have a maximum sulfur content of 0.005% by weight (50 ppm). [38 M.R.S.A. §603-A(2)(A)(3)]
 - c. Beginning January 1, 2018, or on the date specified in 38 M.R.S.A. §603-A(2)(A)(3), the distillate fuel fired at PATHS in Boilers #1 and #2 shall have a maximum sulfur content of 0.0015% by weight (15 ppm). [38 M.R.S.A. §603-A(2)(A)(3)]
4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered, if applicable. Records of annual fuel use shall be kept on a monthly and calendar year total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boilers #1 and #2 [each] Natural Gas	PM	0.05	06-096 CMR 115, BPT
Boilers #1 and #2 [each] Distillate Fuel	PM	0.08	06/096 CMR 115, BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boilers #1 and #2 [each] Natural Gas	0.40	0.40	0.01	0.78	0.65	0.04
Boilers #1 and #2 [each] Distillate Fuel	0.64	0.64	4.03	1.14	0.29	0.02

D. Visible emissions from Boilers #1 and #2 when firing natural gas shall not exceed 10 percent opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

E. Visible emissions from Boilers #1 and #2 when firing distillate fuel shall not exceed 20 percent opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

(17) **Paint Booths #1-3 and Paint Booth #2 Heater**

A. PATHS shall operate and maintain filters on Paint Booths #1-3, shall inspect them at least once a month, and shall maintain inspection records. The maintenance log shall contain information on maintenance and filter replacement. The filters on Paint Booths #1-3 shall be replaced every six months. [06-096 CMR 115, BPT]

B. VOC Emissions from Paint Booths #1-3 shall not exceed the process VOC limit of 0.1 tons per year. [06-096 CMR 115, BPT]

C. Fuel

1. Total fuel use for the Paint Booth #2 Heater shall not exceed 30,000 gal/yr of propane based on a calendar year total basis. [06-096 CMR 115, BPT]
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel delivered. Records of fuel use shall be kept on a monthly and calendar year total basis. [06-096 CMR 115, BPT]

D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Paint Booth #2 Heater	0.07	0.07	0.01	0.19	0.11	0.01

E. Visible Emissions

1. Visible emissions from Paint Booths #1-3 shall not exceed an opacity of 20 percent on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]
2. Visible emissions from the Paint Booth #2 Heater shall not exceed 10 percent opacity on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101]

(18) **Generator #1**

A. Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115]

B. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.17	0.17	0.01	6.26	1.35	0.50

C. Visible Emissions

Visible emissions from Generator #1 shall each not exceed 20 percent opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

D. Generator #1 shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:

1. Manufacturer Certification

Generator #1 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. Ultra-Low Sulfur Fuel

The fuel fired in Generator #1 shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. 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 CFR §60.4207(b) and 06-096 CMR 115]

3. Non-Resetable Hour Meter
A non-resettable hour meter shall be installed and operated on Generator #1.
[40 CFR §60.4209(a)]
4. Annual Time Limit for Maintenance and Testing
 - a. As an emergency engine, Generator #1 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 §60.4211(f)(3)(i) are met). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
 - b. PATHS shall keep records that include maintenance conducted on Generator #1 and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as an emergency and how many hours were spent for non-emergencies. If Generator #1 is operated during a period of demand response or deviation from standard voltage or frequency, 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), PATHS shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.
5. Operation and Maintenance
Generator #1 shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by PATHS that are approved by the engine manufacturer. PATHS may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]
6. Annual Reporting For Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)
If PATHS operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of 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 §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than

March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is 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:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

[40 CFR §60.4214(d)]

(19) **Generator #2**

- A. Generator #2 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115, BPT]
- B. PATHS shall keep records that include maintenance conducted on Generator #2 and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as an emergency and how many hours spent for non-emergencies. [06-096 CMR 115, BPT]
- C. If Generator #2 is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity, PATHS shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [06-096 CMR 115, BPT]
- D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Generator #2	0.05	0.05	0.02	4.28	0.92	0.34

E. Visible Emissions

Visible emissions from Generator #2 shall not exceed an opacity of 10 percent on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 115, BPT]

- F. Generator #2 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #2 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

(20) **Woodworking Equipment**

- A. PATHS shall operate and maintain dust collectors and cyclones associated with the Woodworking Equipment, shall inspect them at least once a month, and shall maintain inspection records. [06-096 CMR 115, BPT]
- B. Visible emissions from the Woodworking Equipment shall not exceed an opacity of 20 percent on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(21) **Parts Washers**

Parts washers at PATHS are subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended).

- A. PATHS shall keep records of the amount of solvent added to each parts washer. [06-096 CMR 115, BPT]
- B. The following are exempt from the requirements of 06-096 CMR 130 [06-096 CMR 130]:
1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
 2. Wipe cleaning; and,
 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to cold cleaning machines that are applicable sources under Chapter 130.
1. PATHS shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
 - a. Waste solvent shall be collected and stored in closed containers.
 - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - e. Sponges, fabric, wood, leather, paper products and other absorbent materials

shall not be cleaned in the parts washer.

- f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
 - h. Work area fans shall not blow across the opening of the parts washer unit.
 - i. The solvent level shall not exceed the fill line.
2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 CMR 130]

(22) PATHS 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 11 DAY OF September, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cove for
AVERY T. DAY, ACTING COMMISSIONER

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 18, 2015

Date of application acceptance: August 19, 2015

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

