STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

POLYVANTIS Sanford LLC **York County** **Sanford, Maine** **A-393-71-AG-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 (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

POLYVANTIS Sanford LLC (POLYVANTIS) has applied to renew its Air Emission License for the operation of emission sources associated with its acrylic plastic resin and sheet products manufacturing facility.

The equipment addressed in this license is located at 1796 Main Street in Sanford, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers and Heaters

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Install.
Giebel Boiler #1	12.7	12,300 scf/hr	natural gas	2011
Heater #1	1.2	1,200 scf/hr	natural gas	2011
Heater #2*	0.7	700 scf/hr	natural gas	2011
Heater #3	1.45	1,400 scf/hr	natural gas	2011
Heater #4	1.2	1,200 scf/hr	natural gas	2011
Heater #5	1.2	1,200 scf/hr	natural gas	2011
Commercial Bldg Heater*	0.15	1.64 gal/hr	propane	2018

* Both Heater #2 and the Commercial Building Heater are considered insignificant activities pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115, Appendix B, § B.2 because they each have a maximum heat input capacity less than 1.0 MMBtu/hr.

POLYVANTIS operates a small emergency generator (Sales Office Generator) that is considered an insignificant activity pursuant to 06-096 C.M.R. ch. 115, Appendix B, § B.3.

These insignificant units are not addressed further in this license.

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Date of Manuf.	Date of Install.
Fire Pump Generator	1.75	179	distillate fuel	1986	1988

The previously licensed Building #1 Generator has been removed.

POLYVANTIS may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.
http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf

Additionally, POLYVANTIS may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

Process Equipment

Equipment	Pollutants	Pollution Control Equipment	Stack
Giebel Building			
Continuous Manufactured Sheet (CMS) Lines	VOC/HAP	2 Condensers followed by 2 Catalytic Oxidizers	Oxidizer 1 and Oxidizer 2
Acrylic Sheet Trimming	PM	Dust Collector	Giebel 3
Other			
Multi-Functional Coating	VOC/HAP	Thermal Oxidizer #1	#6
Laser Cutting Process	HAP	Carbon Adsorption	#7
Silo #7	PM	Baghouse	Silo #7

C. Definitions

Continuous means providing equally spaced data points with at least one valid data point in each successive 15-minute period. A minimum of three valid 15-minute periods constitute a valid hour.

Distillate Fuel means the following:

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

Portable or Non-Road Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or *Logs* mean either hardcopy or electronic records.

D. Application Classification

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

The application for POLYVANTIS 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 06-096 C.M.R. ch. 115.

E. Facility Classification

With the facility-wide limits on VOC and HAP, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because POLYVANTIS is subject to license restrictions that keep facility emissions below major source thresholds for VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for 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 C.M.R. ch. 100. 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. Facility Description

POLYVANTIS uses acrylic resin pellets containing methyl methacrylate (MMA) to produce acrylic sheet products. Pellets are delivered to the facility and transferred to storage in a bank of silos.

The silos feed the facility's continuous manufactured sheet lines (CMS Lines) where the acrylic pellets are melted and forced through an orifice to create extruded acrylic sheet products. Acrylic sheets may then be either mechanically trimmed or laser cut.

The facility also operates boilers, heaters, and other fuel burning equipment and storage units in support of the manufacturing operations.

C. Giebel Boiler #1 and Heaters

POLYVANTIS operates Giebel Boiler #1 and Heaters #1 - #5 for facility heating.

Giebel Boiler #1 is rated at 12.7 MMBtu/hr and fires natural gas. It was installed in 2011 and exhausts through its own dedicated stack.

Heaters #1, #4, and #5 are rated at 1.2 MMBtu/hr each. Heater #3 is rated at 1.45 MMBtu/hr. Heater #2 is considered an insignificant activity and mentioned for completeness only. All of the heaters fire natural gas and exhaust separately.

1. BPT Findings

   The BPT emission limits for Giebel Boiler #1 and the heaters were based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	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
Visible Emissions	–	06-096 C.M.R. ch. 101

   The BPT emission limits for Giebel Boiler #1 and the heaters are the following:

Unit	Pollutant	lb/MMBtu
Giebel Boiler #1	PM	0.05

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Giebel Boiler #1	0.64	0.64	0.64	0.01	1.23	1.04	0.07
Heater #1	0.06	0.06	0.06	–	0.12	0.10	0.01
Heater #3	0.07	0.07	0.07	–	0.14	0.12	0.01
Heater #4	0.06	0.06	0.06	–	0.12	0.10	0.01
Heater #5	0.06	0.06	0.06	–	0.12	0.10	0.01

2. Visible Emissions

   Visible emissions from Giebel Boiler #1 and the heaters each shall not exceed 10% opacity on a six-minute block average basis.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

   Due to their size, Heaters #1, #3, #4, and #5 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. Giebel Boiler #1 is subject to 40 C.F.R. Part 60, Subpart Dc. [40 C.F.R. § 60.40c]

POLYVANTIS shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Giebel Boiler #1 including, but not limited to, the following:

a. POLYVANTIS shall maintain records of the amount of natural gas combusted on-site during each month. [40 C.F.R. § 60.48c(g)(3)]

a. POLYVANTIS shall maintain records required by Subpart Dc for a period of two years following the date of the record. [40 C.F.R. § 60.48c(i)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the two-year record retention requirement of Subpart Dc shall be streamlined to the more stringent six-year requirement.

4. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJJ

Giebel Boiler #1 and the heaters are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. Natural gas-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

D. Fire Pump Generator

POLYVANTIS operates an emergency generator used to power an electric fire pump (Fire Pump Generator). It has an engine rated at 1.75 MMBtu/hr firing distillate fuel that was manufactured in 1986.

1. BPT Findings

The BPT emission limits for the Fire Pump Generator are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.31 lb/MMBtu from AP-42 Table 3.3-1
SO_2	–	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	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions	–	06-096 C.M.R. ch. 101

The BPT emission limits for the Fire Pump Generator are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump Generator	0.54	0.54	0.54	–	7.72	1.66	0.63

Visible emissions from the Fire Pump Generator shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time POLYVANTIS shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

a. The duration of the startup shall not exceed 30 minutes per event;
b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
c. POLYVANTIS shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

2. Chapter 169

The Fire Pump Generator was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

3. New Source Performance Standards (NSPS)

Due to the date of manufacture of the compression ignition emergency engine listed above, the engine is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE),* 40 C.F.R. Part 60, Subpart IIII since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to the Fire Pump Generator. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and is 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. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 63, Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

(i) An emergency engine may be operated for a maximum of 100 hours per calendar year for 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 more than 100 hours per calendar year.

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, 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.

The Fire Pump Generator shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

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

(1) Operation and Maintenance Requirements
[40 C.F.R. § 63.6603(a) and Table 2(d)]

	Operating Limitations
Compression ignition (distillate fuel) units: ***Fire Pump Generator***	- Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; - Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or POLYVANTIS 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 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program
POLYVANTIS has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, POLYVANTIS must keep

records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements
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. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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). [40 C.F.R. § 63.6640(f)]

(6) Recordkeeping
POLYVANTIS shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 63.6655(f)]

E. CMS Lines

The CMS Lines create extruded acrylic sheet products. This process releases MMA, which is both a VOC and a HAP, and methyl acrylate (MA), which is a VOC but not a HAP.

1. Control Equipment

Emissions of MA and MMA from the CMS Lines are controlled by two condensers followed by two electrically powered catalytic oxidizers, i.e., there are two control lines operated in parallel each with a condenser and catalytic oxidizer. Each control line is capable of controlling emissions from the CMS Lines to an overall control efficiency of 95%. Emissions exit through two stacks, Oxidizer 1 and Oxidizer 2.

2. BPT

BPT for the CMS Lines is the use of the condensers and catalytic oxidizers to control emissions of and compliance with the facility-wide limits for VOC and HAP.

Visible emissions from each catalytic oxidizer stack shall not exceed 10% opacity on a six-minute block average basis.

POLYVANTIS shall continuously monitor and record the inlet and outlet temperatures across the catalyst beds during all operating times and immediately take corrective action if either temperature is outside of the range between 450 °F and 1,000 °F on a 1-hour block average basis, the manufacturer-recommended temperature range. The outlet temperatures of the catalytic oxidizers are considered parameter monitors.

POLYVANTIS shall maintain records of the date, time (start and stop), and temperature that caused corrective action to be taken as well as a description of the corrective action.

POLYVANTIS shall maintain records of hours of operation of the CMS Lines on a monthly and calendar year total basis.

By February 14, 2028, and once every five years (no more than 63 months between tests), POLYVANTIS shall conduct performance testing on Condenser #1/Oxidizer #1 and Condenser #2/Oxidizer #2 (i.e., each control grouping) to demonstrate that each is achieving a destruction efficiency for VOC of at least 95%. POLYVANTIS shall conduct this performance testing under normal operating conditions or other conditions approved by the Department.

For any performance testing required by this license, POLYVANTIS shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

The Department's Performance Testing Guidance is available online at:
https://www.maine.gov/dep/air/emissions/testing.html

POLYVANTIS shall sample the VOC concentration and flow rate entering each condenser at least once per month using handheld monitors or equivalent. The results of this monitoring in combination of records of CMS Line operating hours and the average destruction efficiency from the most recent performance test shall be used to calculate emissions of VOC and HAP on a monthly basis. For the purposes of documenting compliance with the facility-wide HAP limits, 100% of the VOC entering the condensers shall be assumed to be MMA. These records of monthly VOC and HAP

emissions shall be used when demonstrating compliance with the facility-wide limits for VOC and HAP.

POLYVANTIS shall maintain a log of the date and details of any repairs or maintenance (planned or unplanned) performed on the condensers and catalytic oxidizers.

F. Multi-Functional Coating Line

At the Multi-Functional Coating Line, coating is applied to acrylic sheet to enhance product properties. The coating material adheres to the product and excess either drips off and is collected and recycled or it evaporates. The coatings used contain VOC (isopropanol and diacetone alcohol).

1. Control Equipment

The Multi-Functional Coating Line is contained in a negative-pressure total enclosure. All emissions from the total enclosure are controlled by Thermal Oxidizer #1. Thermal Oxidizer #1 has been shown to have a control efficiency of greater than 98% based on previous testing conducted on-site.

Thermal Oxidizer #1 is operated at a bed temperature of at least 1,500 °F (1-hour block average) at all times the Multi-Functional Coating Line is operating. The burner is rated at 2.5 MMBtu/hr and fires natural gas.

2. BPT

BPT for the Multi-Functional Coating Line is use of a total enclosure that vents to Thermal Oxidizer #1 to control emissions and compliance with the facility-wide limits for VOC and HAP.

The bed temperature of the thermal oxidizer shall be maintained above 1,500 °F (1-hour block average basis) for all coating line operating times. POLYVANTIS shall continuously monitor and record the bed temperature of Thermal Oxidizer #1 when in operation. The bed temperature of Thermal Oxidizer #1 is considered a parameter monitor. POLYVANTIS shall keep a log detailing dates and times of operation for the Multi-Functional Coating Line.

POLYVANTIS shall maintain records of all coating usage including coating identification, amount used, and VOC and HAP content on a monthly and calendar year total basis. These records, along with a control efficiency of 98%, shall be used to calculate actual emissions on a monthly and calendar year total basis when documenting compliance with the facility-wide VOC and HAP emission limits.

A summary of the BPT analysis for Thermal Oxidizer #1 is the following:

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
NO_x	–	200 lb/MMscf based on twice the value in AP-42, Table 1.4-1, dated 7/98, due to the high amount of thermal NO_x expected
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

The emission limits for Thermal Oxidizer #1 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)
Thermal Oxidizer #1	0.13	0.13	0.13	–	0.49	0.21

Visible emissions from Thermal Oxidizer #1 shall not exceed 10% opacity on a six-minute block average basis.

G. Laser Cutting Process

POLYVANTIS uses a Laster Cutting Process for some acrylic sheets, the cutting of which emits small amounts of MMA. Using measurements, material throughput, and other factors, POLYVANTIS has calculated that this process draws an average of 40 lb/month of MMA into the ventilation system, which captures the emissions and transports them to a carbon bed for MMA removal.

Prior to control by the carbon bed, the Laser Cutting Process has calculated emissions of less than one ton/year; therefore, this unit is considered an insignificant activity pursuant to 06-096 C.M.R. ch. 115, Appendix B, § B.1 and is not required to be included in the air emission license. However, federal regulations require the inclusion of every source of VOC and HAP in the demonstration of compliance with facility-wide emission limits. Thus, POLYVANTIS shall include estimated emissions from the Laser Cutting Process when demonstrating compliance with the facility-wide limits for VOC and HAP.

POLYVANTIS shall conduct sampling of the MMA concentration in the carbon bed exhaust at least once per month using a handheld monitor or equivalent. Prior to breakthrough of the carbon bed, emissions are expected to be negligible.

If sampling results indicate an MMA concentration of greater than 0.5 parts per million (ppm), POLYVANTIS shall replace the carbon bed within three months of such occurrence. Immediately prior to each carbon bed replacement, POLYVANTIS shall measure the ppm of emissions exiting the carbon bed while the Laser Cutting Process is in operation and use with process runtime records to quantify MMA emissions from the Laser Cutting Process from first detection of bed breakthrough to replacement with a new carbon

bed. These records of VOC and HAP emissions shall be used when demonstrating compliance with the facility-wide limits for VOC and HAP.

H. Facility-Wide Emission Limits

POLYVANTIS shall be limited to facility-wide emissions of 9.9 tpy of VOC on a calendar year total basis.

POLYVANTIS shall be limited to facility-wide emissions of 7.9 tpy of any single HAP and 9.9 tpy for all HAP combined on a calendar year total basis.

These are facility-wide limits. As such, emissions from all equipment and processes at the facility and addressed in the air emission license shall be included in calculations used to determine compliance with these limits including emissions from fuel burning equipment.

Compliance with the VOC and HAP emission limits shall be demonstrated by monitoring, recordkeeping, and calculations as necessary and described in this license for each emissions unit to quantify VOC and HAP from individual units and the facility as a whole.

Emissions of VOC and HAP from fuel combustion, shall be based on records of fuel use and AP-42 emission factors. Fuel use shall be based on fuel supplier records or data from fuel flow meters, determined monthly and on a calendar year total basis.

Calculations of annual VOC and HAP emissions shall be performed at least once per calendar year. Additional calculation of emissions to demonstrate compliance with these limits shall be performed upon request by the Department.

I. VOC RACT

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 C.M.R. ch. 134 (VOC RACT) is not applicable to POLYVANTIS because the facility has accepted limits that restrict facility-wide emissions of VOC to less than 40 tpy.

J. Fugitive Emissions of VOC/HAP

BPT for fugitive emissions of VOC and HAP is determined to be keeping containers of VOC/HAP containing liquids covered when not in immediate use and managing materials in such a manner as to reduce the likelihood of spills.

K. Material Handling

Emissions of particulate matter from the storage, conveyance, and handling of pelletized and reground material throughout the manufacturing process are controlled through venting of storage and conveyor equipment through a fabric filter, which exhausts inside the building. Additionally, "conveying and storage of plastic pellets" is identified as an insignificant activity pursuant to 06-096 C.M.R. ch. 115, Appendix B, § A.47. There are no applicable standards for this equipment.

There is one silo, Silo #7, which is equipped with a bin vent filter that exhausts outside the building. Silo #7 is equipped with filter bags to control dust arising from pneumatic conveyance of acrylic pellets.

Emissions of particulate matter from the Giebel Building production area are generated by saws and grinders as part of the Acrylic Sheet Trimming process. POLYVANTIS uses a baghouse-style dust collector to control emissions.

Visible emissions from Silo #7 and the Acrylic Sheet Trimming process shall not exceed 10% opacity on six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(3)]

POLYVANTIS shall keep records of all filter and baghouse maintenance for Silo #7 and the Acrylic Sheet Trimming process.

L. General Process Emissions

Visible emissions from any general process source not otherwise mentioned shall not exceed 20% opacity on a six-minute block average basis.

M. Fugitive Emissions of Particulate Matter

POLYVANTIS shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

POLYVANTIS shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

N. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operating Giebel Boiler #1, Heaters #1 and #3 - #5, and Thermal Oxidizer #1 for 8,760 hours/year;
- Operating the Fire Pump Generator for 100 hrs/yr of non-emergency operation;
- A facility-wide VOC limit of 9.9 tpy; and
- Facility-wide limits of 7.9 tpy for any single HAP and 9.9 tpy for total HAP.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Giebel Boiler #1	2.8	2.8	2.8	–	5.4	4.5	–
Heater #1	0.3	0.3	0.3	–	0.5	0.4	–
Heater #3	0.3	0.3	0.3	–	0.6	0.5	–
Heater #4	0.3	0.3	0.3	–	0.5	0.4	–
Heater #5	0.3	0.3	0.3	–	0.5	0.4	–
Fire Pump Generator	–	–	–	–	0.4	0.1	–
Thermal Oxidizer #1	0.5	0.5	0.5	–	2.1	0.9	–
Facility-Wide	–	–	–	–	–	–	9.9
Total TPY	**4.5**	**4.5**	**4.5**	**–**	**10.0**	**7.2**	**9.9**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	9.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by-case basis. In accordance with 06-096 C.M.R. ch. 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:

Pollutant	Tons/Year
PM_{10}	25
$PM_{2.5}$	15
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.

This determination is based on information provided by the applicant regarding licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require POLYVANTIS to submit additional information and may require an ambient air quality impact analysis at that time.

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-393-71-AG-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof 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. § 347-C).

(2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115] Payment of the annual air emission license fee for POLYVANTIS is due by the end of August of each year. [38 M.R.S. § 353-A(3)]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. 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 C.F.R. 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 C.M.R. ch. 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 the written test report by the Department, or another alternative timeframe approved by the Department, 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 C.F.R. 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 C.M.R. ch. 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 license requirement. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

(16) The licensee 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. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Geibel Boiler #1 and Heaters**

A. Geibel Boiler #1 and Heaters #1, #3, #4, and #5 each shall fire only natural gas. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Geibel Boiler #1	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Giebel Boiler #1	0.64	0.64	0.64	0.01	1.23	1.04	0.07
Heater #1	0.06	0.06	0.06	–	0.12	0.10	0.01
Heater #3	0.07	0.07	0.07	–	0.14	0.12	0.01
Heater #4	0.06	0.06	0.06	–	0.12	0.10	0.01
Heater #5	0.06	0.06	0.06	–	0.12	0.10	0.01

D. Visible emissions from Giebel Boiler #1 and the heaters each shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

E. POLYVANTIS shall maintain records of the amounts of natural gas combusted on-site during each month. [40 C.F.R. § 60.48c(g)(3)]:

(18) **Fire Pump Generator**

A. The fuel sulfur content for the Fire Pump Generator shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump Generator	0.54	0.54	0.54	–	7.72	1.66	0.63

C. Visible Emissions

Visible emissions from the Fire Pump Generator shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time POLYVANTIS shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. POLYVANTIS shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

D. The Fire Pump Generator shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BPT]

1. POLYVANTIS shall meet the following operational limitations for the Fire Pump Generator:

   a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
   b. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
   b. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

2. Oil Analysis Program Option
   POLYVANTIS has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, POLYVANTIS must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

   a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

b. POLYVANTIS shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance
The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or POLYVANTIS shall develop a maintenance plan which provides 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 C.F.R. § 63.6625(e)]

POLYVANTIS shall have available for review by the Department a copy of the manufacturer's emission-related written instructions or the maintenance plan developed by the facility. [06-096 C.M.R. ch. 115, BPT]

6. Startup Idle and Startup Time Minimization
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. [40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(19) **Facility-Wide Emission Limits**

A. POLYVANTIS shall not exceed an emission limit of 9.9 tons per year of VOC on a calendar year total basis. This is a facility-wide limit. As such, emissions from all equipment and processes at the facility and addressed in the air emission license shall be included in calculations used to determine compliance with this limit.
[06-096 C.M.R. ch. 115, BPT]

B. POLYVANTIS shall not exceed emission limits of 7.9 tons per year for any single HAP and 9.9 tons per year for all HAPs combined on a calendar year total basis. These are facility-wide limits. As such, emissions from all equipment and processes at the facility and addressed in the air emission license shall be included in calculations used to determine compliance with these limits, including HAP emissions from fuel burning equipment and all other HAP emission sources. HAPs are as identified in 06-096 C.M.R. ch. 115, Appendix B and in Section 112(b) of the CAA. [06-096 C.M.R. ch. 115, BPT]

C. Compliance with the VOC and HAP emission limits shall be demonstrated by monitoring, recordkeeping, and calculations as necessary and described in this license for each emissions unit to quantify VOC and HAP from individual units and the facility as a whole. Calculations of annual VOC and HAP emissions shall be performed at least

once annually. Additional calculation of emissions to demonstrate compliance with these limits shall be performed upon request by the Department. [06-096 C.M.R. ch. 115, BPT]

(20) **CMS Lines**

A. POLYVANTIS shall vent all emissions from the CMS Lines through the associated condensers and catalytic oxidizers. [06-096 C.M.R. ch. 115, BPT]

B. Visible emissions from each catalytic oxidizer stack shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

C. POLYVANTIS shall continuously monitor and record the inlet and outlet temperatures across the catalyst beds during all operating times and immediately take corrective action if either temperature is outside of the range between 450 °F and 1,000 °F on a 1-hour block average basis. POLYVANTIS shall maintain records of the date, time (start and stop), and temperature that caused corrective action to be taken as well as a description of the corrective action. [06-096 C.M.R. ch. 115, BPT]

D. By February 14, 2028, and once every five years (no more than 63 months between tests), POLYVANTIS shall conduct performance testing on Condenser #1/Oxidizer #1 and Condenser #2/Oxidizer #2 (i.e., each control grouping) to demonstrate that each is achieving a destruction efficiency for VOC of at least 95%. POLYVANTIS shall conduct this performance testing under normal operating conditions or other conditions approved by the Department. [06-096 C.M.R. ch. 115, BPT]

E. For any performance testing required by this license, POLYVANTIS shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

F. Calculation of VOC/HAP [06-096 C.M.R. ch. 115, BPT]

1. POLYVANTIS shall maintain records of the hours of operation of the CMS Lines on a monthly and calendar year total basis.

2. POLYVANTIS shall sample the VOC concentration and flow rate entering each condenser at least once per month using handheld monitors or equivalent.

3. The handheld monitors or equivalent shall be operated, calibrated, and maintained in accordance with the manufacturer's specifications.

4. The results of the monthly monitoring in combination of records of CMS Line operating hours and the average destruction efficiency from the most recent

performance test shall be used to calculate emissions of VOC and HAP on a monthly basis. For the purposes of documenting compliance with the facility-wide HAP limits, 100% of the VOC entering the condensers shall be assumed to be MMA. These records of monthly VOC and HAP emissions shall be used when demonstrating compliance with the facility-wide limits for VOC and HAP.

G. POLYVANTIS shall maintain a log of the date and details of any repairs or maintenance (planned or unplanned) performed on the condensers and catalytic oxidizers. [06-096 C.M.R. ch. 115, BPT]

(21) **Multi-Functional Coating Line**

A. POLYVANTIS shall continuously control VOC and HAP emissions from the Multi-Functional Coating Line by the use of a total enclosure that vents to Thermal Oxidizer #1. [06-096 C.M.R. ch. 115, BPT]

B. POLYVANTIS shall maintain a log of the date and details of any repairs or maintenance (planned or unplanned) performed on Thermal Oxidizer #1. [06-096 C.M.R. ch. 115, BPT]

C. The bed temperature of Thermal Oxidizer #1 shall be maintained above 1,500 °F (1-hour block average basis) for all coating line operating times. [06-096 C.M.R. ch. 115, BPT]

D. POLYVANTIS shall continuously monitor and record the bed temperature of Thermal Oxidizer #1 when in operation. [06-096 C.M.R. ch. 115, BPT]

E. POLYVANTIS shall keep a log detailing dates and times of operation for the Multi-Functional Coating Line. [06-096 C.M.R. ch. 115, BPT]

F. POLYVANTIS shall maintain records of all coating usage including coating identification, amount used, and VOC and HAP content on a monthly and calendar year total basis.

G. Records of coating usage and VOC/HAP content, along with a control efficiency of 98%, shall be used to calculate actual VOC and HAP emissions from the Multi-Functional Coating Line on a monthly and calendar year total basis when documenting compliance with the facility-wide VOC and HAP emission limits. [06-096 C.M.R. ch. 115, BPT]

H. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)
Thermal Oxidizer #1	0.13	0.13	0.13	–	0.49	0.21

I. Visible emissions from Thermal Oxidizer #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. 115, BPT]

(22) **Laser Cutting Process**

A. POLYVANTIS shall conduct sampling of the MMA concentration in the carbon bed exhaust at least once per month using a handheld monitor or equivalent. [06-096 C.M.R. ch. 115, BPT]

B. The handheld monitor or equivalent shall be operated, calibrated, and maintained in accordance with the manufacturer's specifications. [06-096 C.M.R. ch. 115, BPT]

C. If results of the monthly sampling indicate an MMA concentration of greater than 0.5 ppm, POLYVANTIS shall replace the carbon bed within three months of such occurrence. [06-096 C.M.R. ch. 115, BPT]

D. Immediately prior to each carbon bed replacement, POLYVANTIS shall measure the ppm of emissions existing the carbon bed while the Laser Cutting Process is in operation and use with process runtime records to quantify MMA emissions from the Laser Cutting Process from first detection of bed breakthrough to replacement with a new carbon bed. These records of VOC and HAP emissions shall be used when demonstrating compliance with the facility-wide limits for VOC and HAP. [06-096 C.M.R. ch. 115, BPT]

(23) **Fugitive Emissions of VOC/HAP**

POLYVANTIS shall keep containers of VOC/HAP containing liquids covered when not in immediate use and manage materials in such a manner as to reduce the likelihood of spills. [06-096 C.M.R. ch. 115, BPT]

(24) **Material Handling**

A. Visible emissions from Silo #7 and the Acrylic Sheet Trimming process shall not exceed 10% opacity on six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(3]

B. POLYVANTIS shall keep records of all filter and baghouse maintenance for Silo #7 and the Acrylic Sheet Trimming process. [06-096 C.M.R. ch. 115, BPT]

(25) **General Process Sources**

Visible emissions from any general process source not otherwise mentioned shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

(26) **Fugitive Emissions**

A. POLYVANTIS shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

B. POLYVANTIS shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

(27) **Parameter Monitors**

A. The following are identified as Parameter Monitors:

1. Temperature monitors on the outlet of the catalytic oxidizers; and
2. Temperature monitor on the bed temperature of Thermal Oxidizer #1.

B. Parameter monitors required by this license shall be installed, operated, maintained, and calibrated in accordance with manufacturer recommendations or as otherwise required by the Department.

C. Parameter monitors required by this license shall continuously monitor data at all times the associated emissions unit is in operation.

D. Each parameter monitor must record accurate and reliable data. If any parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action. The Department may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the Department's satisfaction that the failure of the system to record such data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions

[06-096 C.M.R. ch. 115, BPT]

(28) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, POLYVANTIS may be required to submit additional information. Upon written request from the Department, POLYVANTIS shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.
[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 12th DAY OF MAY, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____ for ____
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/27/2023
Date of application acceptance: 5/8/2023

This Order prepared by Lynn Muzzey, Bureau of Air Quality.