



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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Praxair Surface Technologies, Inc.
York County
Biddeford, Maine
A-643-71-M-R/A (SM)

Departmental
Findings of Fact and Order
Air Emission License
Renewal/Amendment

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

Praxair Surface Technologies, Inc. (Praxair) has applied to renew their Air Emission License permitting the operation of emission sources associated with their surface coatings applications facility. Praxair has also requested their license be amended to remove units no longer in service, to correct the heat input capacities of some furnaces, to rename equipment and stacks listed in the previous license to align with the designations currently used by the facility, and to revise/edit license conditions to provide clarity.

The equipment addressed in this license is located at 24 Landry Street, Biddeford, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license. Note: All of the units listed in the following table fire natural gas.

Fuel Burning Equipment

Current Designation	Former Designation (in previous license)	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (scf/hr)	Install. Date	Stack #
Pit Furnace #0	~unchanged	1.98	1922	2006	33
Pit Furnace #1		2.0	1942	1990	19 & 20
Pit Furnace #2		1.4	1352	1990	18 & 19
Pit Furnace #3		2.0	1942	1997	16 & 17

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17 STATE HOUSE STATION
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(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

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106 HOGAN ROAD, SUITE 6
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1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
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Current Designation	Former Designation (in previous license)	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (scf/hr)	Install. Date	Stack #
Pit Furnace #4	~unchanged	2.0	1942	1997	14 & 15
Pit Furnace #5		1.98	1922	2008	31
Pit Furnace #6		1.98	1922	2008	32
Box Furnace #1	New Box Furnace #1	1.98	1922	2007	2
Box Furnace #2	New Box Furnace #2	1.98	1922	2007	3
Box Furnace #3	New Box Furnace #3	1.98	1922	2007	6
Box Furnace #4	~was not in previous license	1.98	1922	2008	36
Box Furnace #5	Box Furnace K2	2.0	1942	1992	9
Box Furnace #6	Box Furnace K1	2.6	2524	1992	7
Box Furnace #7	Box Furnace #1	1.4	1352	1992	10
Box Furnace #8	Box Furnace #2	1.98	1922	1995	48
~removed from license	Box Furnace #3	~removed from license			
	Box Furnace #4				
	Box Furnace #5				
Grieve Oven #1	~unchanged	1.0	1040	1998	22
Grieve Oven #3	Oven #SC3	1.0	1040	2000	11
Grieve Oven #5	~unchanged	1.0	1040	1998	21
Grieve Oven #6		1.0	1040	1996	26
Grieve Oven #9	Oven #SC1	1.0	1040	2000	25
Air Make-up Unit #1	~unchanged	3.0	3120	2000	fugitive
Air Make-up Unit #2		3.0	3120	2000 (purchased) 2007 (put into use)	fugitive

Process Equipment

Process Area	Type of Equipment	Pollution Control Equipment	Stack #
Diffusion Area	Packed powder coating application	Dry filter media and high efficiency particulate absorption (HEPA) filters	fugitive
SermeTel Area	HVLP spray guns and spray booths	HVLP spray guns, spray booths w/poly filters	
Thermal Spray Area	Plasma arc powder coating application	Dry filter media and HEPA filters	fugitive

C. Application Classification

The application for Praxair includes the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units and a modification to the license.

The modification of a minor source is considered either a major or a minor modification based on whether or not expected emissions increases exceed the "Significant Emissions Increase" levels as defined in the Department's regulations. The emission increases are usually determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions. However, Praxair is not requesting any change to the facility-wide fuel cap to accommodate the modification, since the facility is also removing fuel burning equipment; thus, there will be no change in license allowed emissions levels because of this modification. Therefore, the modification is determined to be a minor modification and has been processed as such.

This application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With the facility-wide fuel limit and the volatile organic compounds (VOC) limits associated with the coatings processes, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor source. With the facility-wide fuel limit and the hazardous air pollutants (HAP) limits associated with the coatings processes, the facility is licensed below the major source thresholds for 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 as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is determined through a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

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

- 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. Process Description

Before proceeding with the control requirements for each unit or process area, a general process description of the facility and its operation is provided.

Praxair is an international company which develops and applies high-performance coatings and applications technologies for use in a variety of markets where resistance to corrosion, erosion, fouling, and high temperatures is essential. Markets served include aerospace, oil and gas, chemical processing, general industrial, industrial gas turbines, and other varied markets utilizing small metal parts. The Biddeford facility includes thermal spray, composite electroplating, diffusion, and high performance slurry coatings processes.

There are six coating areas at the Praxair facility, three of which are equipped with controls through which emissions pass before being released to the atmosphere. Emissions from the other three coating areas are vented inside the building.

1. The following three coating areas which vent to the outside are addressed in this license:

- a. The Diffusion Area includes a coating line which applies a packed powder coating through diffusion of the coating into the base alloy in high temperature furnaces. Parts to be coated are placed in retort trays, which are then subjected to high temperatures in a furnace. The Diffusion Area includes a pack station and an unpack station, both of which were manufactured and installed in 2012. Both pack and unpack stations and all local exhausts in the Diffusion Area exhaust to dust collectors equipped with HEPA filters, with a capture efficiency of 100% and a control efficiency of 99.97%.

Emissions from this area include particulate matter hazardous air pollutants (PM HAP).

- b. The SermeTel Area applies coatings to components using high velocity, low pressure (HVLP) spray guns. There is one manually operated spray gun at each of the four work stations in the coating booth. The SermeTel Area has a Big Booth and Organic Cell #1, both manufactured and installed in 2001.

Emissions from this area include PM HAP, non-particulate matter HAP (non-PM HAP), and VOC.

- c. The Thermal Spray Area utilizes two spray booths, Plasma Booth 1 and Plasma Booth 2, to apply a variety of powder coatings using energy created by a plasma arc.

Emissions from this area include PM HAP (chromium and nickel). Both spray booths exhaust to a dust collector equipped with HEPA filters, with a capture efficiency of 100% and a control efficiency of 99.97%.

2. The three coating areas vented inside the building are the following:
 - a. The Masking Area houses the preparatory process for coating applications. Here, maskants (materials that shield and protect areas or parts of a metal surface during an etching or coating process) are prepared using a variety of materials including adhesives, diluents, and nickel powder.
 - b. In the Sermalcote Area, a slurry coating is applied to parts by manually dipping the part into coating. This application process was installed in January 2001.
 - c. The Platinum Plating Area applies a platinum coating on parts via electric deposition.

Because units identified in this section are all vented inside the building and not to the ambient air, process emissions from these units are not further addressed in this air emission license.

C. Natural Gas-Fired Units

Fuel burning units at Praxair consist of the furnaces and ovens in the Diffusion, SermeTel, and Sermalcote areas and air make-up units.

1. New Source Performance Standards (NSPS)

The 22 natural gas-fired furnaces, ovens, and air make-up units at the Praxair facility are each rated at less than 10 MMBtu/hour. Due to the size of each and the fact that none are steam generating units, none of these units are 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/hour and manufactured after June 9, 1989.

2. BACT/BPT Findings

Box Furnace #4 is a new unit which was not included in the previous license. As such, it is subject to BACT requirements. Based on the BACT analysis provided by the facility, the Department has determined that BACT for this unit is the use of natural gas, good combustion practices, and the emission limits as identified below.

The BACT/BPT emission limits for the natural gas-fired units were based on the following:

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Source of Emission Factor</u>
PM	0.05 lb/MMBtu	A-643-71-K-R/A (12/19/2008) and 06-096 CMR 115; BPT
PM ₁₀		
SO ₂	0.6 lb/MMscf	AP-42, Table 1.4-2 (7/98)
NO _x	100 lb/MMscf	AP-42, Table 1.4-1 (7/98)
CO	84 lb/MMscf	
VOC	5.5 lb/MMscf	AP-42, Table 1.4-2 (7/98)
Visible Emissions	--	06-096 CMR 101

The BACT/BPT emission limits for the natural gas-fired units are as stated in the following table. Note: Emissions of SO₂ from each unit firing natural gas are negligible and thus not quantified in the table.

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Pit Furnace #0 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #1 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #2 (1.4 MMBtu/hr)	0.07	0.07	0.14	0.11	0.01
Pit Furnace #3 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #4 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #5 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #6 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #1 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #2 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #3 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #4 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #5 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #6 (2.6 MMBtu/hr)	0.13	0.13	0.25	0.21	0.01
Box Furnace #7 (1.4 MMBtu/hr)	0.07	0.07	0.14	0.11	0.01
Box Furnace #8 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Grieve Oven #1 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #3 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #5 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #6 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #9 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Air Make-up Unit #1 (3.0 MMBtu/hr)	0.15	0.15	0.31	0.26	0.02
Air Make-up Unit #2 (3.0 MMBtu/hr)	0.15	0.15	0.31	0.26	0.02

Visible emissions from each of the above listed units shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period.

Praxair shall be limited to 165.4 MMscf of natural gas on a 12-month rolling total basis.

3. Periodic Monitoring

Periodic monitoring for the natural gas-fired units shall include recordkeeping to document fuel use both on a monthly and a 12-month rolling total basis. [06-096 CMR 115, BPT]

4. These natural gas-fired units are not boilers and are thus not subject to 40 CFR Part 63, Subpart JJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.*

D. Process Equipment

Materials currently used in Praxair's process areas could potentially result in emissions of the following VOC and HAP pollutants:

<u>CAS No.</u>	<u>Pollutant</u>	<u>Pollutant Category</u>	<u>Process Area</u>
7440-47-3	Chromium III (Cr III)	HAP (PM)	Diffusion, Thermal, SermeTel
	Chromium VI (CR VI)		SermeTel
7440-02-0	Nickel (Ni)		Diffusion
78-93-3	Mehtyl Ethyl Ketone (MEK)	VOC	SermeTel
111-15-9	2-ethoxyethyl Acetate (EGEEA)	VOC, HAP	
1330-20-7	Xylenes	VOC, HAP	
7440-48-4	Cobalt (Co)	HAP (PM)	Thermal
7429-90-5	Aluminum Dust (Al)	PM	Diffusion, Thermal, SermeTel
141-78-6	Ethyl Acetate (EA)	VOC	SermeTel
7697-37-2	Nitric Acid (HNO ₃)	--	
68186-88-9	Zinc Iron Chromite Spinel	HAP (PM)	
7440-66-6	Zinc Dust (Zn)	PM	
13463-67-7	Titanium Dioxide (TiO ₂)	PM	Diffusion

1. NESHAP: 40 CFR Part 63, Subpart HHHHHH

Because Praxair is an existing area source of HAP (constructed prior to September 17, 2007), that performs spray application of coatings that contain the target HAP identified in this regulation (chromium and nickel) to a metal substrate on a part or product, the facility is subject to applicable requirements of 40 CFR Part 63, Subpart HHHHHH, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.* The definition of "spray applied coating" excludes the powder diffusion process, dip coating, and thermal spray coating; therefore, the Diffusion, Thermal, and Sermalcote processes are

not subject to this regulation. The SermeTel area meets the definition of a "spray applied coating" activity and is thus subject to applicable requirements of this regulation.

The parts of the Praxair facility's SermeTel area subject to requirements of this regulation include but are not limited to the following:

- a. Mixing rooms and equipment;
- b. Spray booths, ventilated prep stations, curing ovens, and associated equipment;
- c. Spray guns and associated equipment;
- d. Spray gun cleaning equipment; and
- e. Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint.

[40 CFR §63.11171(b)]

Praxair submitted a Notice of Compliance per 40 CFR §63.11175(a), dated January 11, 2011, that the facility is subject to this subpart.

Praxair shall comply with the applicable requirements of 40 CFR Part 63, Subpart HHHHHH, including but not limited to the applicable management practices described in 40 CFR §63.11173(e); the applicable training procedures described in 40 CFR §63.11173(f); and the applicable recordkeeping practices described in 40 CFR §63.11177(a) through (g). [40 CFR Part 63, Subpart HHHHHH]

2. 40 CFR Part 63, Subpart WWWWWW

Because Praxair is an existing, area source of HAP engaged in thermal spraying, the facility is subject to applicable requirements of 40 CFR Part 63, Subpart WWWWWW, *National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations*. These operations are affected sources under Subpart WWWWWW only when they use materials that contain or have the potential to emit Plating and Polishing Metal HAP.

Plating and polishing metal HAP means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form, with the exception of lead. Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1% by weight (as the metal), and does not contain manganese in amounts greater than or equal to 1.0% by weight (as the metal), as reported on the Material Safety Data Sheet for the material, is not considered to be a plating and polishing metal HAP.

Praxair submitted a Notice of Compliance per 40 CFR §63.11509(b), dated June 21, 2010, that the facility is subject to this subpart. As identified in the notification, Plasma Booth 1 and Plasma Booth 2 both have the potential to

emit chromium (Cr) and nickel (Ni). Each of these two booths exhaust to a dust collector with HEPA filter rack, with a capture efficiency of 100% and a control efficiency of 99.97% in the 0.2 - 0.5 micron range, in compliance with this regulation.

Praxair shall comply with the applicable requirements of 40 CFR, Part 63, Subpart WWWW, including but not limited to the applicable collection and control requirements of 40 CFR §63.11507(f); the applicable management practices of 40 CFR §63.11507(g); and the applicable compliance certification requirements of 40 CFR §63.11509(c) through (f).

3. 06-096 CMR 129, *Surface Coating Facilities*

This rule establishes requirements for testing, evaluating, and limiting the emissions of VOC and HAP from specific surface coating operations. Praxair is subject to applicable requirements of this rule under the "Miscellaneous Metal Parts and Products" subcategory. However, there are no applicable emission limits because Praxair meets the exemption criteria under Section 1(C)(4) for facilities license limited to 1,666 pounds of VOC per calendar month from all surface coating operations. Praxair has at all times been in compliance with this limitation.

Praxair is not exempt from the rule via the Section 2(E) powder coating exemption because the SermeTel process utilizes products that contain VOC. Praxair is therefore subject to the requirements for handling, storage, and disposal of materials containing VOC as outlined in Section 4, the test methods and procedures described in Section 6, and the monthly recordkeeping procedures in Section 7(A)(d) and 7(B).

4. 06-096 CMR 159, *Control of Volatile Organic Compounds from Adhesives and Sealants*

The substances used in Praxair's coatings applications processes are not considered adhesives or sealants as defined in 06-096 CMR 159. Thus, the facility is not subject to requirements of this rule.

5. BACT/BPT Findings

The Department finds the following controls and facility-wide emission limits as BPT for emissions from these process sources: [06-096 CMR 115, BACT/BPT]

a. Controls

- 1) Diffusion Area – the use of dry filter media and HEPA filters to control PM HAP from the application of powder coatings in the Diffusion Area

- 2) SermeTel Area – the use of high volume, low pressure (HVLP) spray guns and poly filters to control PM, VOC, and HAP emissions from the SermeTel Area
 - 3) Thermal Spray Area (plasma) – the use of dry filter media and HEPA filters to control PM from the application of powder coatings
- b. Facility-Wide Emission Limits
- 1) Non-Particulate Matter (non-PM) HAP Emission Limits, on a 12-month rolling total basis
 - 1 ton/year of any one single non-PM HAP
 - 2 tons/year of total non-PM HAP
 - 2) HAP (PM) Emission Limits, on a 12-month rolling total basis
 - 9.9 tons/year of any one PM HAP
 - 12.0 tons/year of total PM HAP

c. Compliance Documentation

Praxair shall demonstrate compliance with the above limits through recordkeeping. Records shall include the following:

- 1) Safety Data Sheet (SDS) for each coating, cleaning solvent, or other VOC/HAP containing material used;
- 2) The percent by weight of VOC and the percent by weight of HAP in each substance;
- 3) The quantity of each substance used, on both a monthly and a 12-month rolling total basis; and
- 4) The calculated quantities of VOC and HAP emitted, on both a monthly and a 12-month rolling total basis.

Calculations of emissions shall be based on SDS information, the daily usage log, purchase records, and the assumption that 100% of VOC and HAP contained in the applied substances is released to the atmosphere.

E. General Process Emissions

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

F. Annual Emissions

1. Total Annual Emissions

Praxair shall be restricted to the following annual emissions, on a 12-month rolling total basis. The tons per year limits were calculated based on the following:

- the annual use of 165.4 MMscf of natural gas
- the facility-wide limit of 1.0 ton per year of any one single non-PM HAP
- the facility-wide limit of 2.0 tons per year of total non-PM HAP
- the facility-wide limit of 9.9 tons per year of any one single PM HAP
- the facility-wide limit of 12.0 tons per year of total PM HAP

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

Pollutant	Combustion Units	Process Equipment	Total TPY
PM	4.2	--	4.2
PM ₁₀	4.2	--	4.2
SO ₂	0.1	--	0.1
NO _x	8.3	--	8.3
CO	7.0	--	7.0
VOC	0.5	10.0	10.5
Single non-PM HAP	--	1.0	1.0
Single PM HAP	--	9.9	9.9
Total non-PM HAP	--	2.0	2.0
Total PM HAP	--	12.0	12.0

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).

Based on the facility's fuel use limit; the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98; and the global warming

potentials contained in 40 CFR Part 98; Praxair is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

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. As specified in 06-096 CMR-115, an ambient air quality impact analysis is not required for a minor source if the total emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

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

The total facility licensed emissions 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-643-71-M-R/A subject to and 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, at any time 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: [06-096 CMR 115]
- 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.

- (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 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) Natural Gas-Fired Units

A. Fuel

1. Praxair shall fire natural gas in all fuel burning equipment. [06-096 CMR 115, BACT/BPT]
2. Total fuel use for the Praxair facility shall not exceed 165,400,000 cubic feet of natural gas on a 12-month rolling total basis. [06-096 CMR 115, BPT]

Compliance shall be documented through recordkeeping of fuel use both on a monthly and a 12-month rolling total basis in the natural gas-fired units. [06-096 CMR 115, BPT]

B. Emissions from each unit shall not exceed the following:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.05	A-643-71-K-R/A (12/19/2008) and 06-096 CMR 115; BPT

- C. Emissions shall not exceed the limits contained in the following table. [06-096 CMR 115, BPT] Note: Emissions of SO₂ from each unit firing natural gas are negligible and thus not quantified in the table.

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Pit Furnace #0 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #1 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #2 (1.4 MMBtu/hr)	0.07	0.07	0.14	0.11	0.01
Pit Furnace #3 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #4 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #5 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Pit Furnace #6 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #1 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #2 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #3 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #4 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #5 (2.0 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Box Furnace #6 (2.6 MMBtu/hr)	0.13	0.13	0.25	0.21	0.01
Box Furnace #7 (1.4 MMBtu/hr)	0.07	0.07	0.14	0.11	0.01
Box Furnace #8 (1.98 MMBtu/hr)	0.10	0.10	0.19	0.16	0.01
Grieve Oven #1 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #3 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #5 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #6 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Grieve Oven #9 (1.0 MMBtu/hr)	0.05	0.05	0.10	0.09	0.01
Air Make-up Unit #1 (3.0 MMBtu/hr)	0.15	0.15	0.31	0.26	0.02
Air Make-up Unit #2 (3.0 MMBtu/hr)	0.15	0.15	0.31	0.26	0.02

D. Visible emissions from each of the above listed units shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 CMR 101]

(17) **Process Equipment**

- A. Praxair shall operate all control equipment, including dry filter media, HEPA filters, HVLP spray guns, and poly filters, as appropriate, whenever the associated coating applications equipment is in use. Control equipment shall be operated and maintained in accordance with manufacturer's specifications. [06-096 CMR 115, BPT]
- B. Praxair shall maintain on the premises monthly records of the name and identification of each VOC-containing substance used and the VOC content of the material (mass per unit volume) for each coating unit, line, operation, or area. [06-096 CMR 115, BPT]

C. Requirements of 06-096 CMR 129

1. Praxair shall not emit more than 1,666 pounds of VOC per calendar month from all surface coating operations. Compliance shall be demonstrated by monthly mass balance calculations using the quantity of each material used and the VOC content of each material, as found on the material safety data sheets. [06-096 129 (1)(C)(4)]
2. Praxair shall comply with the applicable handling, storage, and disposal requirements for materials containing VOC as outlined in Section 4 of 06-096 CMR 129.
3. Praxair shall comply with the applicable test methods and procedures as described in Section 6 of 06-096 CMR 129.
4. Praxair shall comply with the applicable monthly recordkeeping procedures as described in Section 7(A)(d) and 7(B) of 06-096 CMR 129.

(18) **Facility-Wide HAP Emission Limits**

- A. HAP emissions from the Praxair facility shall not exceed the following: [A-643-71-K-R/A (December 19, 2008), BPT]
1. 1 ton/year of any one single non-PM HAP
 2. 2 tons/year of total non-PM HAP
 3. 9.9 tons/year of any one PM HAP
 4. 12.0 tons/year of total PM HAP
- B. Praxair shall demonstrate compliance with the above limits through recordkeeping. Records shall include the following: [06-096 CMR 115, BPT]
1. SDS for each coating, cleaning solvent, or other VOC/HAP containing material used;
 2. The percent by weight of VOC and the percent by weight of HAP in each substance;
 3. The quantity of each substance used, on both a monthly and a 12-month rolling total basis; and
 4. The calculated quantities of VOC and HAP emitted, on both a monthly and a 12-month rolling total basis.

Calculations of emissions shall be based on SDS information, the daily usage log, purchase records, and the assumption that 100% of VOC and HAP contained in the applied substances is released to the atmosphere.

(19) 40 CFR Part 63, Subpart HHHHHH

Praxair shall comply with the applicable requirements of 40 CFR Part 63, Subpart HHHHHH, including but not limited to the following:

- A. The parts of the Praxair facility's SermeTel area subject to requirements of this regulation include but are not limited to the following:
 1. Mixing rooms and equipment;
 2. Spray booths, ventilated prep stations, curing ovens, and associated equipment;
 3. Spray guns and associated equipment;
 4. Spray gun cleaning equipment; and
 5. Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint.[40 CFR §63.11171(b)]
- B. Praxair shall comply with the applicable management practices described in 40 CFR §63.11173(e) and (f) as follows:
 1. Praxair shall ensure and certify that all new and existing personnel, including contract personnel, who spray-apply surface coatings, as defined in 40 CFR §63.11180, are trained in the proper application of surface coatings and the proper setup and maintenance of spray equipment. The training program must include, at a minimum, the following items:
 - a. A list of all current personnel by name and job description who are required to be trained;
 - b. Hands-on and classroom instruction of initial and refresher training addressing the following:
 - (1) Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.
 - (2) Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
 - (3) Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
 - (4) Routine spray booth and filter maintenance, including filter selection and installation.

- (5) Environmental compliance considerations pertaining to this operation.
- c. A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required here are not required to provide the initial training required by that paragraph to these painters.
2. All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the following requirements [40 CFR §63.11173(e)(2)]:
- a. All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98% capture of paint overspray, based on published filter efficiency data provided by filter vendors.
- b. Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.
3. All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator.
4. All paint spray gun cleaning shall be conducted such that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.
- C. Praxair shall comply with the applicable recordkeeping practices described in 40 CFR §63.11177(a) through (g) as follows:

1. Certification that each painter has completed the training specified in 40 CFR §63.11173(f) with the date the initial training and the most recent refresher training was completed.
 2. Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in 40 CFR §63.11173(e)(3)(i).
 3. Documentation from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by the Administrator to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in 40 CFR §63.11173(e)(4).
 4. Copies of any notifications and reports submitted as required by this Subpart.
 5. Records of any deviation from the applicable requirements of this Subpart. These records must include the date and time period of the deviation, a description of the nature of the deviation, and the actions taken to correct the deviation.
- D. Records shall be maintained for a period of at least five years after the date of each record. Copies of records must be kept on-site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period. [40 CFR §63.11178]

(20) **40 CFR Part 63, Subpart WWWWWW**

Praxair shall comply with the applicable requirements of 40 CFR, Part 63, Subpart WWWWWW, including but not limited to following:

- A. The Thermal Spray Area's Plasma Booth 1 and Plasma Booth 2, existing permanent thermal spraying operations at the facility, are considered affected sources under Subpart WWWWWW only when materials are used which contain or have the potential to emit Plating and Polishing Metal HAP. An operation is considered to contain or have the potential to emit Plating and Polishing Metal HAP when compounds of cadmium, chromium, lead, manganese, or nickel, or any of these metals (except lead) in elemental form are used or have the potential to be emitted in quantities of 0.1% or more, or 1.0% for elemental or compounds of manganese. [40 CFR Part 63, Subpart WWWWWW]
- B. At such times as the Thermal Spray Area is using materials which contain or have the potential to emit Plating and Polishing Metal HAP, Praxair shall

operate a capture system that collects PM emissions from the thermal spraying process and transports the emissions to a HEPA filter. [40 CFR §63.11507(f)]

- C. Praxair shall comply with the applicable management practices of 40 CFR §63.11507(g), including the following:
1. Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable.
 2. Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable.
 3. Perform regular inspections to identify leaks and other opportunities for pollution prevention.
- D. Praxair shall keep the manufacturer's operating instructions for the HEPA filter controls on the Thermal Spray Area at the facility at all times in a location where they can easily be accessed by the operators. [40 CFR §63.11508 (c)(9)]
- E. Praxair shall comply with the applicable notification, reporting, and recordkeeping requirements of 40 CFR §63.11509(c) through (f), as follows:
1. Praxair shall prepare an annual certification of compliance report for the Thermal Spray Area. These reports do not need to be submitted unless a deviation from the applicable requirements of Subpart WWWW has occurred during the reporting year, in which case, the annual compliance report must be submitted along with the deviation report. [40 CFR §63.11509(c)(2)(iii)]
 2. Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period and kept in a readily-accessible location for inspector review. If a deviation has occurred during the year, each annual compliance report must be submitted along with the deviation report, and postmarked or delivered no later than January 31 of the year immediately following the reporting period. [40 CFR §63.11509(c)(7)]
 3. Praxair shall report any deviations from the compliance requirements specified in Subpart WWWW which occurred during the calendar year, along with the corrective action taken. [40 CFR §63.11509(d)]
 4. Praxair shall maintain records of the following [40 CFR §63.11509(e)]:
 - a. A copy of any Initial Notification and Notification of Compliance Status that was submitted and all documentation supporting those notifications.

- b. Records of maintenance performed on the air pollution control equipment.
 - c. Records required to show continuous compliance with each management practice and equipment standard that applies to this facility.
5. Praxair shall keep each record for a minimum of five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Praxair shall keep each record onsite for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). Praxair may keep the records offsite for the remaining 3 years. [40 CFR §63.11509(f)]

(21) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a one-hour period. [06-096 CMR 101]

- (22) Praxair 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 18 DAY OF July, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 23, 2013

Date of application acceptance: October 3, 2013

Date filed with the Board of Environmental Protection:

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

