



DEPARTMENT ORDER

**Pioneer Plastics Corporation  
Androscoggin County  
Auburn, Maine  
A-448-77-12-M**

**Departmental  
Findings of Fact and Order  
New Source Review  
NSR #12**

**FINDINGS OF FACT**

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

**I. REGISTRATION**

**A. Introduction**

FACILITY	Pioneer Plastics Corporation (Pioneer)
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Revision
NAICS CODES	325211, 322222, 326130
NATURE OF BUSINESS	Manufacturer of decorative laminate, melamine coated paper, and specialty resins
FACILITY LOCATION	One Pionite Rd, Auburn, Maine

**B. NSR License Description**

Pioneer Plastics Corporation (Pioneer) has requested a New Source Review (NSR) license to revise emission rates used for demonstrating compliance with the annual CO emission limit for Boiler #5/TO to address the addition of Impregnator P9.

**C. Emission Equipment**

The following equipment is addressed in this NSR license:

**Fuel Burning Equipment**

<b>Equipment</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>
Boiler #5/TO	39.5	263.3 gal/hr	#4, #6 Fuel Oil
	50.0	48,550 scf/hr	Natural Gas

Process Equipment

Equipment	Unit Capacity	Primary Product	Pollution Control Equipment
Urea Reactor K1	3,000 gallons	Melamine resins, urea resins (occasionally)	Boiler #5/TO
Melamine Reactor K2	1,200 gallons		
Urea Reactor K3 / Resin Blender	5,000 gallons	Primary use: blending tank	Boiler #5/TO (when methanol or other VOC/ HAP is used in K3)
		Occasional use: urea resins production	Vapor Condenser (when acetone is used)
Polyester Reactor #1 K4	3,500 gallons	Polyester Resins	Boiler #5/TO
Polyester Reactor #2 K5	3,500 gallons		
Letdown Reactor K6	5,000 gallons		
Pilot Reactor K7	100 gallons		
Polyester Reactor #3 K8	3,500 gallons		
Impregnator P4	150 ft/min	Phenolic Impregnated Kraft Paper	
Impregnator P5	600 ft/min		
Impregnator P9 (including Press 1 and Feed Tank #67)	400 ft/min		
Coater C4	45 ft/min	Polyester Papers	

Unit capacities for process equipment are listed for informational purposes only and are not intended as license restrictions.

D. Application Classification

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

The application submitted by Pioneer does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

The proposed revision will not change the facility's emission limits. Therefore, the NSR license is determined to be a minor revision under *Minor and Major Source Air Emission License Regulations* 06-096 Code of Maine Rules (C.M.R.) ch. 115. The procedures found in 06-096 C.M.R. ch. 115 can be utilized to process this application since the proposed revision is not prohibited by the Part 70 air emission license. An application to incorporate

the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

## **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 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 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### **B. Revision Description**

Pioneer utilizes Boiler #5/TO to incinerate VOC- and HAP-laden emission streams from its manufacturing process, specifically from the impregnators (P4, P5, and P9), Coater C4, and the reactors in the specialty resins department (Specialty Resins). To maximize the benefit of firing fuel in this unit, Pioneer operates it both as a pollution control device and as a boiler by including heat recovery to produce steam for the facility.

Boiler #5/TO is subject to a federally-enforceable emissions cap of 329.0 tpy of CO on a 12-month rolling total basis. However, when firing natural gas, emissions of CO vary depending upon the combination of process equipment in operation.

Pioneer developed CO emission rates (lb/hr) based on extensive stack testing performed under various operating scenarios. Pioneer demonstrates compliance with the CO emissions cap by multiplying these emission rates, which are listed in their air emission license, by the number of hours of operation of each operating scenario.

Pioneer installed Impregnator P9 in 2018. Condition (3) of Air Emission License A-448-77-9-A (issued 7/21/2017) required Pioneer to perform stack testing to determine the effect of the addition of this emission unit to emissions of CO from Boiler #5/TO. Pioneer performed this testing in March 2019. Based on the results of this testing, Pioneer has proposed updating the emission rates used in their compliance demonstration to the following:

Emission Unit Combination	Average CO Emission Rate (lb/hr) while Burning Natural Gas
Specialty Resins only	0.60
Specialty Resins + P9	12.5*
Impregnator P5 only	13.3
Specialty Resins + P5	15.7
Specialty Resins + P5 + P9	17.5*
Specialty Resins + P4 + P5	32.9
Specialty Resins + C4 + P5	42.0
Specialty Resins + C4 + P4 + P5 + P9	78.4

\*Designates new emission rates.

The Department finds that the emission rates listed above are appropriate for use in demonstrating compliance with the facility's annual CO emission limit for Boiler #5/TO.

C. Incorporation Into the Part 70 Air Emission License

Per *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140 § 1(C)(8), for a modification at the facility that has undergone NSR requirements or been processed through 06-096 C.M.R. ch. 115, the source must apply for an amendment to their Part 70 license within one year of commencing the proposed operations, as provided in 40 C.F.R. Part 70.5. An application to incorporate the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

D. Annual Emissions

This minor revision makes no changes to the facility's annual emissions.

III. AMBIENT AIR QUALITY ANALYSIS

Pioneer previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. An additional ambient air quality analysis is not required for this NSR license.

### ORDER

The Department hereby grants New Source Review Minor Revision A-448-77-12-M pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the standard and special conditions below.

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

The following shall replace Condition (5) of Air Emission License A-448-77-6-A:

(5) **CO Emission Rates**

When firing natural gas, Pioneer shall calculate CO emissions on a monthly and 12-month rolling total basis using the following emission rates for each operating scenario:

<b>Emission Unit Combination</b>	<b>Average CO Emission Rate (lb/hr) while Burning Natural Gas</b>
Specialty Resins only	0.60
Specialty Resins + P9	12.5
Impregnator P5 only	13.3
Specialty Resins + P5	15.7
Specialty Resins + P5 + P9	17.5
Specialty Resins + P4 + P5	32.9
Specialty Resins + C4 + P5	42.0
Specialty Resins + C4 + P4 + P5 + P9	78.4

Pioneer shall calculate the CO emissions from Boiler #5/TO by multiplying the above lb/hr emission rate by the number of hours of operation, depending on the operating scenario. The minutes of operation for Impregnators P4, P5, and P9 as well as Coater C4 shall be documented through both paper log sheets that the machine operators complete each day, and in minute-by-minute data recorded in the facility's computer database system. Operations of the Specialty Resins operations (K1 – K8) shall be recorded in paper batch logs that are written by the reactor operators, and the Specialty Resins Department's diverter damper position (vented to Thermal Oxidizer or vented to atmosphere) shall be recorded every 15 minutes in the Citect computer database system.

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The requirements of Condition (3) of Air Emission License A-448-77-9-A have been met.  
This condition is now considered obsolete and no longer in effect.

DONE AND DATED IN AUGUSTA, MAINE THIS 28<sup>th</sup> DAY OF May, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

  
GERALD D. REID, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/10/19

Date of application acceptance: 4/17/19

Date filed with the Board of Environmental Protection:

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

