

**PIONEER PLASTICS CORPORATION)
ANDROSCOGGIN COUNTY)
AUBURN, MAINE)
A-448-77-2-M)**

**DEPARTMENTAL
FINDING OF FACT AND ORDER
AIR EMISSION LICENSE
NEW SOURCE REVIEW #2**

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

I. REGISTRATION

Pioneer Plastics Corporation (Pioneer) operates a manufacturing plant in Auburn, Maine. The principal products are Pionite, a decorative laminate used for counter tops and furniture, and low pressure decorative laminates. Pioneer has requested a minor revision to modify their air emissions license, A-448-70-A-A/I. The minor revision request is for process modifications associated with the K8 reactor and the installation of a tile saw controlled with a dust collector.

FACILITY	Pioneer Plastics Corporation (Pioneer)
LICENSE NUMBER	A-448-77-2-M
LICENSE TYPE	Chapter 115 Minor Revision
NAICS CODES	325211, 322222, 326130
NATURE OF BUSINESS	Manufacturer of decorative laminate, melamine coated paper, and specialty resins
FACILITY LOCATION	Auburn, Maine
DATE OF INITIAL LICENSE ISSUANCE	April 20, 2004
DATE OF MINOR REVISION ISSUANCE	April 30, 2007
LICENSE EXPIRATION DATE	April 20, 2009

II. APPLICATION CLASSIFICATION

Pioneer's application was submitted pursuant to the minor revision procedures in Chapter 115. The application for Pioneer does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing or record keeping. This amendment will not increase licensed allowable emissions of any

pollutant and actual emissions will increase by less than 4 tons/year for each single pollutant and less than 8 tons/year for all pollutants combined. Therefore, this modification is determined to be a minor revision under Chapter 115 and has been processed as such. This application seeks to add flexibility with the use of the K8 reactor to produce both polyester resin and melamine resin. Also, this revision will include a new tile saw and dust collector.

III. REVISION DESCRIPTION

A. K8 Reactor Project Description

Pioneer has requested a minor revision for a process change associated with the use of one of their reactor vessels. Pioneer would like to begin producing melamine resin in an existing polyester reactor (K8) to meet customer production demands. The K8 reactor is currently permitted in Air Emissions License, A-448-70-A-A/I, under Condition 21 (A) to operate only with polyester resin as with existing polyester resin reactors: K4, K5, K6, and K7. Pioneer requests a new condition for the K8 reactor which will combine the requirements of polyester resin reactors and those of the melamine/urea resin reactors. Pioneer is currently licensed to operate melamine/urea resin reactors as specified in Condition 19 for K1, and K2 reactors.

After the issuance of this license revision, Pioneer wants the primary product produced in K8 to be melamine resin. As long as operating time for melamine production in K8 is at least 5 percent in the first five year period following licensing approval, or in any subsequent five year period thereafter, this unit will be subject to the Amino/phenolic Maximum Available Control Technology (MACT), as described under flexible operations process unit in 40 CFR § 63.1400. If the operating time for polyester resin production in K8 ever exceeds 95 percent in the first five year period following approval of this application, or in any subsequent five year period thereafter, K8 will be subject to the Miscellaneous Organic NESHAP (MON) rule, and no longer subject to the Amino/Phenolic MACT.

Emission Calculations

The estimated emissions to the thermal oxidizer for this reactor if it were to produce polyester resins is approximately 35,000 pounds per year which would result in emissions to the atmosphere of less than 700 pounds per year based on historical emission factors and assuming a destruction efficiency of the thermal oxidizer of 98%.

The emissions for the process change to allow melamine blending in the K8 reactor are estimated to be approximately 90,000 pounds to the thermal oxidizer with resulting emissions of 1,800 pounds per year (less than 1 ton/year) of HAP emissions, assuming 98% destruction efficiency of the Thermal Oxidizer. This calculation conservatively assumes that all the methanol that is present in the incoming solution is released during the resin manufacturing process.

Flexibility

Pioneer would like to retain the operational flexibility to produce either melamine resin or polyester resin in K8. Emissions from K8 are currently vented to the Thermal Oxidizer (VOC incinerator) for control via the MACT vent collection system. The Thermal Oxidizer has a control efficiency rate of greater than 98%. By having this flexibility for melamine or polyester production, licensed allowed HAP and VOC emissions will not increase from the facility and actual emissions increase will be minimal, as described in the emissions calculations section. Emissions from K8 will be vented to the Thermal Oxidizer which meets the requirements for both MACT and Best Practical Treatment (BPT). BPT is met by complying with the applicable MACT requirements for K8 reactor.

During Operating Scenario 1 (OS1), K8 produces polyester resin. During Operating Scenario 2 (OS2), K8 produces melamine resin. Requirements will vary depending on the Operating Scenario. The conditions of this minor license revision will indicate which requirements K8 will be subject to depending on the operating scenario.

B. New Tile Saw

Pioneer would like to add a tile saw to their air emissions license. The tile saw will be used to cut tiles for Pioneer's various products. After review of Pioneer's Air Emissions License, A-448-70-A-A/I, the number of saws is not mentioned in Condition (24), which specifies requirements for routers, table saws, and sanders. Currently, PM emissions from all their saws, cutters, and sanders are controlled by baghouses.

The tile saw is new to this air license; therefore, the unit is subject to Best Available Control Technology, as defined in Chapter 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts. To meet BACT, Pioneer shall install a fabric filter dust collector to control particulate emissions. The following requirements shall determine that BACT is being met:

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Opacity

Pioneer accepts streamlining for opacity requirements. The requirements in MEDEP Chapter 101 §2(C) are applicable, however, the BACT opacity requirement is more stringent and therefore will be streamlined into this license revision. Visible emissions from the tile cutting saw equipment with fabric filter control shall not exceed an opacity of 10%, on a 6-minute block average basis, except for no more than (1) one (6) six minute block average in a 1-hour period. The facility shall take corrective action if visible emissions from the dust collector exceed 5% opacity.

Particulate Matter

The requirements of MEDEP Chapter 105 §4 are applicable.

Periodic Monitoring

Periodic monitoring shall include record keeping, including maintenance of the inspection logs of the dust collector system.

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, or increment standards either alone or in conjunction with emissions from other sources.

The Department hereby grants this minor revision, A-448-77-2-M, subject to the conditions found in Air Emission License A-448-70-A-A/I and subsequent amendments, in addition to the following conditions:

Pioneer is subject to the following New Source Review Chapter 115 condition.

Process Equipment

(1) Polyester/Melamine Resin Production: Reactor K8

When K8 is producing/blending polyester resin, operating under Operating Scenario 1 (OS1); the following requirements apply:

1. VOC RACT requirements:

- (a) At all times that K8 is producing polyester resin, Pioneer shall vent the emissions from the main outlet vent to the Thermal Oxidizer for destruction, except such emissions may be vented to the Wet Scrubber system for control for up to 300 hours a calendar year. [MEDEP Chapter 134]
- (b) At all times that K8 is blending polyester resins, Pioneer shall vent the emissions from the main outlet vent through the separating column and vapor condenser which shall be operated to maximize the condensation of any emissions. The temperature of the coolant on the inlet side of the vapor condensers to K8 shall be maintained below 100 degrees Fahrenheit while the reactor is blending polyester resins. Pioneer shall record the date and length of time in minutes when each reactor is blending polyester resins. In addition, Pioneer shall monitor and record in a log the temperature of the coolant on the inlet side of the vapor condensers to K8, every 6 hours. Pioneer shall maintain such records for a minimum of 6 years and they shall be submitted to the Bureau of Air Quality upon request. [MEDEP Chapter 134]
- (c) Pioneer shall maintain a log detailing the period of time in hours and minutes, that such emissions receive control by the use of the wet scrubber system. Pioneer shall maintain such records for a minimum of 6 years and they shall be submitted to the Bureau of Air Quality upon request. [MEDEP Chapter 134]

2. MON Requirements of 40 C.F.R. Part 63, Subpart FFFF

Pioneer's polyester reactor K8 is subject to the Miscellaneous Organic Chemical Production Processes National Emission Standards for Hazardous Air Pollutants (MON) because this MACT rule includes, among other source subcategories, Alkyd Resins Production and Polyester Resins Production, [40 C.F.R. Part 63, Subpart FFFF]. The MON rule was finalized on November 10, 2003 with a compliance date of May 2008. This unit will only be subject to the MON rule if operating time from production of polyester resins is more than 95 percent of the total operating time in the first five-year period following license approval.

When K8 is producing/blending melamine resin, operating under Operating Scenario 2 (OS2); the following requirements apply:

1. Melamine and Urea (Amino) Resin Production, K8 reactor is subject to the Amino/Phenolic Resin Production National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements 40 C.F.R. Part 63, Subpart OOO.

The Amino/Phenolic Resin Production NESHAP promulgated on January 20, 2000 (40 C.F.R. Part 63, Subpart OOO) applies to Pioneer’s melamine and urea resin production operations. K8 is subject to the Amino/Phenolic MACT during production of melamine or urea resins, where operating time from melamine production is at least 5 percent in the first five-year time period following approval of this license revision, or in any five-year time period thereafter.

- a. Pioneer filed a pre-compliance report on January 18, 2002 per 40 C.F.R. § 63.1417(d).
- b. Pioneer will comply with the applicable HAP emission standard as described below:

EMISSION POINT	APPLICABILITY	STANDARD	CITATION
Aggregate Batch Vent Stream on Reactor K8.	Applies to all aggregate batch process vents	83% reduction over the batch cycle using a control device	40 C.F.R. §63.1408(a)(2)(ii)
Heat Exchange System on K8	The condition in 40 C.F.R. §63.1409(a)(1) is met and therefore Pioneer is not subject to the monitoring requirements for leaks of its heat exchange.	Monitor for leaks per the generic MACT Equipment Leak Provisions in 40 C.F.R. Part 63, Subpart UU.	40 C.F.R. §63.1409(a)(1-6)

EMISSION POINT	APPLICABILITY	STANDARD	CITATION
Equipment Leaks	The equipment contains or contacts >5 weight % organic HAP and operates >300 hours per year.	Comply with 40 C.F.R. 63 Subpart UU (Generic MACT equipment leak rule), control level 2 for all equipment (defined in 40 C.F.R. §63.1402) that contains or contacts >5% HAPs and operates at >300 hours per year.	40 C.F.R. §63.1410

- c. Pioneer shall follow the Start-up, Shutdown, Malfunction Plan that was developed prior to the compliance date of January 20, 2004 per 40 CFR §63.6(e)(3) and Table 1 of 40 CFR Part 63 Subpart OOO.
- d. Pioneer conducted an initial performance test on the thermal oxidizer to determine the minimum parameter monitoring level per 40 CFR §63.1413(a)(1)(i).
- e. Pioneer shall submit a site specific test plan 90 days prior to the performance test referenced in (20)c above per 40 CFR §63.1417(h)(2).
- f. Pioneer shall provide notification to the Administrator 30 days prior to the planned performance test referenced in (20)c. above per 40 CFR §63.1417(h)(3)
- g. Pioneer filed a Notification of Compliance Status Report by June 20, 2004, per 40 C.F.R. §63.1417(e) detailing compliance methods.
- h. Pioneer shall file Periodic Reports semiannually, no later than 60 days after the end of the six-month period, per 40 C.F.R. §63.1417(f).
- i. Pioneer shall meet the compliance demonstration procedures per 40 C.F.R. §63.1413. [Owners of “large control devices” (that control emission points with total emissions of 10 tpy or more before control) must conduct a performance test no later than June 20, 2004. See 40 C.F.R. §63.1413(a)(2)(ii)(C).] Pioneer submitted this report on time.
- j. Pioneer shall keep records as indicated in 40 C.F.R. §63.1416:

When K8 is producing/blending either polyester or melamine resin, it is subject to the following requirements:

- 1. Visible emissions from K8 shall be limited to 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period [MEDEP Chapter 140]

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2. Particulate emissions from K8 shall be limited to the applicable limitation from Table 105A or the formula in Section 4 of Chapter 105. [MEDEP Chapter 105]

Pioneer is subject to the following New Source Review Chapter 115 condition.

- (2) Pioneer may install a new tile cutting saw with a dust collector to control particulate emissions. Visible emissions shall be limited to 10% opacity on a 6-minute block average basis except for no more than (1) one (6) six minute block average in a 1-hour period. The facility shall take corrective action if visible emissions from the dust collector exceed 5% opacity. In order to document maintenance of the baghouses, Pioneer shall keep a maintenance log recording the date and location of all bag failures. The log shall be maintained for at least six years and available to the Department upon request. [MEDEP Chapter 140, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 7, 2007

Date of application acceptance: February 20, 2007

Date filed with Board of Environmental Protection: _____

This Order prepared by Edwin Cousins, Bureau of Air Quality