

Specialty Minerals, Inc.)	Departmental
Franklin County)	Findings Of Fact And Order
Jay, Maine)	Air Emission License
A-647-71-F-R/A)	

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

A. Introduction

Specialty Minerals, Inc. (SMI) of Jay, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their precipitated calcium carbonate (PCC) manufacturing facility.

SMI was issued license A-647-71-D-A on August 1, 2000, permitting the installation of a fifth carbonator and a third lime silo. A condition of this license changed the number of hours each carbonator was allowed to operate. This equipment was never installed, and SMI currently has no plans to install an additional carbonator or lime silo. SMI has requested to return to their original (pre-amendment) permit conditions regarding hours of operation of the four existing carbonators.

B. Emission Equipment

SMI is authorized to operate the following air emission units:

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollutant Emitted</u>	<u>Pollution Control Equipment</u>	<u>Stack #</u>
Carbonator 1	3.5 tons PCC/hr	particulate	mist eliminators	1
Carbonator 2	3.5 tons PCC/hr	particulate	mist eliminators	2
Carbonator 3	3.5 tons PCC/hr	particulate	mist eliminators	3
Carbonator 4	3.5 tons PCC/hr	particulate	mist eliminators	4
Lime Silo 1	20 tons lime/hr	particulate	fabric filter	5
Lime Silo 2	20 tons lime/hr	particulate	fabric filter	6

C. Application Classification

The application for SMI does not include the licensing of increased emissions or the installation of new or modified equipment. SMI is requesting a return to original operating conditions regarding hours of operation for the four carbonators. This request merely restores license conditions but does not result in increased emissions. Therefore the license is considered to be a renewal plus a minor modification.

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 Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. 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.

Before proceeding with the control requirements for each unit a general process description is provided to identify where the equipment fits into the process.

Process Description

SMI processes lime (calcium oxide) to produce precipitated calcium carbonate. The raw material, lime is stored in the lime silos prior to use in the process.

The raw lime reacts with water to make calcium hydroxide (slake). This reaction takes place in the slakers. Because this reaction is highly exothermic, heat exchangers are utilized to cool the product.

The calcium hydroxide then reacts with carbon dioxide provided from International Paper's lime kilns' exhaust to make calcium carbonate. This reaction takes place in the four carbonators. The carbonators are equipped with mist eliminators for particulate control.

The final product is sent to paper mills for filler, or dewatered and used as a coating.

B. Carbonators

The four carbonators react carbon dioxide with calcium hydroxide to form calcium carbonate. Particulate matter emissions from the carbonators are controlled by a 2-stage demister, with a removal efficiency of approximately 90%. In addition, the reaction that occurs in the carbonators acts as an alkaline scrubber and reduces SO₂ and TRS contained in the lime kiln exhaust by approximately 80%. CO, NO_x and VOC emission rates for the carbonators are based on emission rates for International Paper's lime kilns and stack tests of flue gas lines that transport flue gases from International Paper's lime kilns to SMI's facility. The carbonators are each limited to 8000 hours of operation per 12-month rolling year.

Visible emissions from each of the four carbonators shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than 1 six minute block average in a 1 hour period.

C. Lime Silos

SMI operates two bulk lime silos. Particulate matter emissions from the lime silos are controlled by fabric filters. BPT for the lime silos is the continued use and maintenance of the fabric filters. Visible emissions from each fabric filter shall not exceed 5% opacity.

D. Annual Emission Restrictions

Emissions are based on 8000 hours of operation for each carbonator in a 12-month rolling period.

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	12.3
PM ₁₀	12.3
SO ₂	10.7
NO _x	96.0
CO	40.0
VOC	11.2
TRS	2.5

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the total facility emissions, SMI is below the emissions level required for modeling and monitoring.

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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-647-71-F-R/A, subject to the following conditions:

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.
- (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.
- (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.
- (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.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
 - (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
 - (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.
 - (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 the renewal of a license or amendment shall not stay any condition of the license.
 - (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.
 - (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:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. 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

- b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) 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
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (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:
 - (i) 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
 - (ii) 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
 - (iii) 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 provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (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.

- (15) Upon written request of 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 manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

(16) Carbonators

- (i) The carbonators shall each not exceed 8000 hours of operation per 12-month rolling year. SMI shall keep a log recording the date and duration of operation (in hours) every time each carbonators is operated. The log shall be maintained for six years and shall be made available to the Department upon request.
- (ii) SMI shall continue to operate and maintain mist eliminators on the carbonators.
- (iii) Emissions from the carbonators shall not exceed the following:

**Carbonator Emission Limits
Per Carbonator**

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.72
PM ₁₀	0.72
SO ₂	0.7
NO _x	6.0
CO	2.5
VOC	0.7
TRS*	0.16

- (iv) PM and PM₁₀ shall each not exceed 0.012 grains per dry standard cubic foot from each carbonator. Compliance shall be demonstrated by stack tests performed at the Department's request.
- (v) TRS shall not exceed 4 ppmv (measured as H₂S) from each carbonator. Compliance shall be demonstrated by stack tests performed at the Department's request.

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- (vi) Visible emissions from each carbonator shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than 1 six minute block average in a 1 hour period.
- (17) Lime Silos
- (i) SMI shall maintain and operate fabric filters on the lime silos. Maintenance records shall be kept In order to document maintenance of the fabric filters, SMI shall keep a maintenance log recording the date and location of all filter failures as well as all routine maintenance.
- (ii) Emissions from the lime silo fabric filters shall not exceed the following:

**Lime Silo Emissions
Per Silo**

Pollutant	gr/dscf
PM	0.01
PM ₁₀	0.01

- (iii) Visible emissions from each fabric filter shall not exceed 5% opacity, on a six minute block average basis.
- (18) Annual Emission Statement
- In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department by September 1, the information necessary to accurately update the State's emission inventory by means of:
- (i) A computer program and accompanying instructions supplied by the Department; or
- (ii) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

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(19) SMI shall pay the annual air emission license fee within 30 days of August 31 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

(20) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 28, 2002

Date of application acceptance: September 13, 2002

Date filed with Board of Environmental Protection: _____

This order prepared by Rachel E. Pilling, Bureau of Air Quality