



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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March 27, 2015

Mr. James A. Stott
Operations Manager
S.M. Lorusso and Sons Inc. –
Wrentham Quarry
331 West Street
Walpole, MA 02081

RE: Wrentham
Transmittal No.: X259289
Application No.: SE-15-002
Class: *SM-25*
FMF No.: 134434
AIR QUALITY PLAN APPROVAL

Dear Mr. Stott:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application (“Application”) listed above. This Application concerns the proposed operation of your non-metallic mineral processing (crushing) plants located at Whiting Street in Wrentham, Massachusetts (“Facility”). The Application bears the seal and signature of Paul Hanbury, Massachusetts Registered Professional Engineer Number 38757.

This Application was submitted as required by Administrative Consent Order With Penalty ACOP-SE-14-9009-27, dated October 31, 2014, and in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-N, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

S.M. Lorusso and Sons, Inc. (“the Permittee”) operates an existing stationary rock crushing plant, three portable rock crushing plants, and three portable rock screening plants. Over the years, the Facility has installed equipment subject to Massachusetts Air Pollution Control Regulations.

The Permittee proposes to operate the existing nonmetallic mineral processing (crushing) plant such that particulate matter emissions and noise are mitigated and do not cause or contribute to a condition of air pollution. The stationary plant is powered from line power. The engines that power the portable plants are subject to Federal Regulation 40 CFR 89, and are exempt from Plan Approval.

The stationary plant (Emission Unit [EU-1]) consists of feeders, crushers, screens, and conveyors. This plant is capable of processing up to 595 tons per hour of material. The Facility’s six portable plants consist of three rock crushing plants and three screening plants. These portable units can be moved around the facility as necessary to locate it closer to newly excavated material stockpiles.

Portable crushing plant (EU-2) includes a jaw crusher and conveyor and is capable of processing up to 880 tons per hour of material. EU-3 and EU-4 are identical crushing plants that each consist of a portable cone crusher and three conveyors. Each of these plants are capable of processing up to 485 tons per hours of material. All crushing plants are located within a quarry pit.

Portable screening plants include a pair of track mounted screens, each with five conveyors (identified as EU-5 and EU-6). EU-7 consists of a screen plant with three conveyors.

A comprehensive water spray dust suppression system is installed on the subject emission units to minimize particulate emissions from the rock crushing operation. This dust suppression system consists of spray bars and fog nozzles located at crusher inlets and discharge points and at various belt conveyor transfer points. In addition the crusher outlets are shrouded and the plant is hosed down with water as needed to minimize the amount of accumulated dust on the plant.

Fugitive particulate emissions from roadway dust and noise emissions will be minimized via Best Management Practices (BMPs) contained in the Application, and the Dust Control Plan (see Special Conditions, (Table 5) of this Plan Approval).

Facility equipment not subject to Plan Approval includes a ultra low sulfur distillate fired boiler that has a heat input range below 10 MMBtu/hr and meets the exemption criteria contained in 310 CMR 7.02(2)(b)15. Best Available Control Technology is defined in Table 2.

The Permittee has indicated that the Project is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Since MassDEP has not

accepted delegation for Subpart OOO for sources which are not subject to 310 CMR 7.00 Appendix C, the Permittee is advised to consult with EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912, telephone: (617)918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.

2. EMISSION UNIT IDENTIFICATION

Each Emission Unit (“EU”) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU#	Description	Design Capacity	Pollution Control Device (PCD)
1	<u>Stationary Crushing and Screening Plant</u> Lippmann Jaw Crusher, 42”x48” Nordberg Cone Crusher, 5 ½ Symons Nordberg Omni Crusher, 1560 SH Nordberg Omni Crusher, 1560 SH Deister Screen, 6’x16’ TD Trio Screen, 5’x15’ DD Deister Screen, 5’x15’ DD Allis Chalmers Screen, 6’x16’ TD Allis Chalmers Screen, 6’x16’ DD Simplicity Screen, 5”x14’ DD 13 Conveyors and 2 Feeders	Max. Raw Material Production Rate: 595 tons per hour	Wet Dust Suppression System, shroud at crusher outlet
2	<u>Portable Crushing Plant</u> Metso/Nordberg Jaw Crusher LT125, 37”x49” 1 Conveyor	Max. Raw Material Production Rate: 880 tons per hour	Wet Dust Suppression System, shroud at crusher outlet
3	<u>Portable Crushing Plant</u> Metso/Nordberg Cone Crusher, LT300HP 3 Conveyors	Max. Raw Material Production Rate: 485 tons per hour	Wet Dust Suppression System, shroud at crusher outlet
4	<u>Portable Crushing Plant</u> Metso/Nordberg Cone Crusher, LT300HP 3 Conveyors	Max. Raw Material Production Rate: 485 tons per hour	Wet Dust Suppression System, shroud at crusher outlet
5	<u>Portable Screening Plant</u> Metso/Nordberg Screen, ST620, 6’x20’ TD 5 Conveyors	Max. Raw Material Production Rate: 485 tons per hour	Wet Dust Suppression System
6	<u>Portable Screening Plant</u> Metso/Nordberg Screen, ST620, 6’x20’ TD 5 Conveyors	Max. Raw Material Production Rate: 485 tons per hour	Wet Dust Suppression System
7	<u>Portable Screening Plant</u> Astec Screen, DS303, 6’x20’ TD 3 Conveyors	Max. Raw Material Production Rate: 485 tons per hour	Wet Dust Suppression System

Table 1 Key:

EU# = Emission Unit Number
 TD = Triple Deck
 ‘ = inches

PCD = Pollution Control Device
 DD = Double Deck
 ‘ = feet

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU#	Operational / Production Limit / Restrictions / Operating Parameters	Air Contaminant	Emission Limit ¹
1	1. Mineral processing not to exceed 150,000 TPM	PM	1.32 TPM
			10.57 TPY
	2. Mineral processing not to exceed 1,200,000 TPY	PM ₁₀	0.48 TPM
			3.87 TPY
	3. Operate using only line power	PM _{2.5}	0.06 TPM
			0.49 TPY
2-7 comb- ined	4. Mineral processing not to exceed 62,500 TPM	PM	0.41 TPM
			3.25 TPY
	5. Mineral processing not to exceed 500,000 TPY	PM ₁₀	0.15 TPM
			1.19 TPY
		PM _{2.5}	0.02 TPM
			0.18 TPY
1-7	6. Screening and conveyer/transfer operations	Opacity	≤ 7%
	7. Crushing operations		≤ 10%

Table 2 Key:

EU# = Emission Unit Number
 TPM = tons per month
 PM_{2.5} = Particulate Matter less than or equal to 2.5 microns in diameter
 PM₁₀ = Particulate Matter less than or equal to 10 microns in diameter

TPY = tons per consecutive 12-month period
 TPH = tons per hour
 PM = Total Particulate Matter

Table 2 Note

1. PM, PM₁₀, and PM_{2.5}, emission factors are as specified in the most current issue of “Compilation of Air Pollutant Emission Factors”, EPA Publication No. AP-42, Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU#	Monitoring and Testing Requirements
1 – 7	1. Monitor date and operating hours of the nonmetallic mineral processing plant.
	2. Monitor material processed on a monthly basis and a basis to document compliance status with the maximum monthly and rolling 12-month processing rates and to determine the actual PM, PM ₁₀ and PM _{2.5} emission rates specified in Table 2 above.
	3. Visually inspect each wet dust suppression system during daily startup of the nonmetallic mineral processing plant.
Facility-wide	4. Monitor visible dust emissions (opacity) at all times such that appropriate action can be taken to comply with the limits specified in Table 2 and to prevent a condition of air pollution.
	5. The Permittee shall monitor heating oil purchases such that only heating oil containing no greater than 0.0015 percent sulfur content by weight is purchased for use in the exempt fuel burning unit.
	6. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13.
	8. At least 30 days prior to emission testing, the Permittee shall submit to MassDEP for approval a stack emission pretest protocol.
	9. Within 45 days after emission testing, the Permittee shall submit to MassDEP a final stack emission test results report.

Table 3 Key:

EU# = Emission Unit Number	USEPA = United States Environmental Protection Agency
PM _{2.5} = particulate matter less than 2.5 micrometers in diameter	PM ₁₀ = particulate matter less than 10 micrometers in diameter
CMR = Code of Massachusetts Regulations	PM = particulate matter

Table 4	
EU#	Record Keeping Requirements
2 - 7	1. The Permittee shall maintain adequate records on-site detailing the movement of portable plants EU2, EU3, EU4, EU5, EU6, and EU7 off site, to include EU#, location moved to, and the date(s) of movement.
Facility-wide	2. The Permittee shall maintain records of the visual observations at the crushing plant and the facility grounds.
	3. The Permittee shall maintain records of routine and emergency maintenance performed on the water spray system.
	4. The Permittee shall maintain adequate records on-site to demonstrate compliance status with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of PM, PM _{2.5} and PM ₁₀ emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping .
	5. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	6. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.
	7. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	8. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	9. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	10. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	11. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

PM₁₀ = particulate matter less than 10 micrometers in diameter
 SOMP = Standard Operating and Maintenance Procedure

PCD = Pollution Control Device
 EU# = Emission Unit Number

PM_{2.5} = particulate matter less than 2.5 micrometers in diameter PM = particulate matter
 USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Southeast Regional Office of MassDEP, BAW Compliance and Enforcement (C/E) Chief by telephone (508) 946-2817, email sero.air@state.ma.us or fax (508) 947-6557 as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to C/E Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall report annually every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP’s written request.

Table 5 Key:

EU# = Emission Unit Number
 CMR = Code of Massachusetts Regulations
 BAW = Bureau of Air and Waste

4. SPECIAL TERMS AND CONDITIONS

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU#	Special Terms and Conditions
1 - 7	1. Permit shall employ wet dust suppression system at all times while unit is in operation, in accordance with Best Management Practice and General Provision as contained in the Application.

Table 6	
EU#	Special Terms and Conditions
Facility -wide	<p>3. <u>DUST CONTROL PLAN</u></p> <ul style="list-style-type: none"> • The crushing plants utilize a wet dust suppression system. Spray bars are located at crusher inlets and discharges, and belt conveyor transfer points. • Crusher outlets will be shrouded. • The plant will be hosed down on an as-needed basis to minimize the amount of accumulated dust on the plant. • A mechanical street sweeper will clean the paved portions of the site as needed. • The unpaved roadways will be wetted down by a water truck as needed. • Stockpiles will be kept high and crushers will be shrouded. • Speed limit signage will be posted in the yard in enforced by the Applicant’s personnel. The speed limit for the haul roads is 30 miles per hour. The speed limit in the vicinity of the scale house is 10 miles per hour. • All loads will be trimmed and covered at an appointed location. • The scale will be swept daily and kept clean. • The existing vegetation and vegetated buffer zones will be maintained. • DAILY visual inspections will be conducted and corrective measures taken immediately when necessary. DAILY visual inspections must be performed by the following personnel and appropriately recorded: <ul style="list-style-type: none"> - Site superintendent - Scale operator - Water truck / road sweeper operator • Plant Misting System must be used at all times (weather permitting) without exception. • Review plan monthly and document effectiveness as well as any charges required. • Post DUST CONTROL PLAN in conspicuous area and review quarterly with employees.

B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part

or device that restricts the vertical exhaust flow of the emitted gases, including, but not limited to, rain protection devices known as “shanty caps” and “egg beaters.”

- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
n/a	n/a	n/a	n/a	n/a

Table 7 Key:

EU# = Emission Unit Number
 n/a = not applicable

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Dan Kamieniecki by telephone at (508) 946-2717, or in writing at the letterhead address.

*This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.*

Thomas Cushing
Permit Chief
Bureau of Air and Waste

Enclosure

ecc: Wrentham Board of Health
Wrentham Fire Department
MassDEP/Boston – Y. Tian
MassDEP/SERO – M. Pinaud
MassDEP/SERO – L. Black
ETG/Engineering Technologies Group, Inc. – M. Scholl