Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 082018-013  Project Number: 2018-07-035
Installation Number: 203-0034

Parent Company: Best Lime Manufacturing
Parent Company Address: 12090 Delaware Stone Road, Eminence, MO 65466
Installation Name: Best Lime Manufacturing
Installation Address: 12090 Delaware Stone Road, Eminence, MO 65466
Location Information: Shannon County (S30, T28N, R4W)

Application for Authority to Construct was made for:
The installation of an agricultural lime production plant. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.

☐ Standard Conditions (on reverse) are applicable to this permit.
☑ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Prepared by
Ryan Schott
New Source Review Unit

Director or Designee
Department of Natural Resources
Aug 20 2018
Effective Date
STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department’s Air Pollution Control Program of the anticipated date of startup of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department’s regional office responsible for the area within which you are located within 15 days after the actual startup of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department’s personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
http://dnr.mo.gov/regions/
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted to the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority.”

Best Lime Manufacturing
Shannon County (S30, T28N, R4W)

1. Operational Requirement – Water Spray

   B. Watering may be suspended during periods of freezing condition, when use of the water spray devices may damage the equipment. During these conditions, Best Lime Manufacturing shall adjust the production rate to control emissions from these units. Best Lime Manufacturing shall record a brief description of such events.

2. Record Keeping Requirements
   Best Lime Manufacturing shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources’ personnel upon request.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW
Project Number: 2018-07-035
Installation ID Number: 203-0034
Permit Number: 082018-013

Installation Address: Best Lime Manufacturing
12090 Delaware Stone Road
Eminence, MO 65466
Shannon County (S30, T28N, R4W)

Parent Company: Best Lime Manufacturing
12090 Delaware Stone Road
Eminence, MO 65466

REVIEW SUMMARY

- Best Lime Manufacturing has applied for authority to install an agricultural lime production plant.

- The application was deemed complete on July 19, 2018.

- The only expected HAP emissions are the products of diesel combustion.

- 40 CFR 60, Subpart HH – Standards of Performance for Lime Manufacturing Plants does not apply to the installation because a rotary lime kiln is not used.


- Water spray devices are being used to control particulate emissions from the screen.

- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of PM are above the de minimis level but below the major source level. Potential emissions of all other pollutants are below their respective de minimis levels.

- This installation is located in Shannon County, an attainment area for all criteria pollutants.
• This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. Although “Lime Plants” is item number 11 on the list, Best Lime Manufacturing does not have an NAICS Code that matches this specific classification of lime manufacturing. The installation’s major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

• Ambient air quality modeling was not performed as a part of this review. Although PM emissions exceed the de minimis level, no ambient air quality standards currently exists for PM.

• Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal, or applicable rules.

• No Operating Permit is required for this installation. Although PM emissions exceed the de minimis level, PM does not trigger operating permit requirements.

• Approval of this permit is recommended with special conditions.

INSTALLATION/PROJECT DESCRIPTION

Best Lime Manufacturing is proposing to install a small agricultural lime plant at a quarry in Shannon County. The plant will consist of a Portec 3850 Horizontal Shaft Impactor (primary crusher), a 5’ x 16’ Vibrating Screen, a Stedman 44” 4-Row Cage Mill (fines crusher), and seven total conveyors. A 750 kVA generator set will be used to power the plant. Water will be sprayed on the material as it passes through the screen to mitigate particulate emissions from screening and milling.

The product lime and by-product rock will be stored in piles adjacent to the crushing equipment and will not be relocated to other piles unless too much material is produced. No haul trucks are currently expected to operate onsite, and a wheel loader will be used to load/move the crushed material. Product will be transported offsite by a dump truck, which only travels a short distance from the lime pile to the public road, where it is then delivered to customers.

No permits have previously been issued to Best Lime Manufacturing from the Air Pollution Control Program.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42 Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition (AP-42).
PM, PM\textsubscript{10}, and PM\textsubscript{2.5} emissions from the crushing and handling equipment were calculated using emission factors from AP-42, Section 11.19.2 *Crushed Stone Processing and Pulverized Mineral Processing* (August 2004). Emissions from the screen are controlled by water spray; therefore, the controlled emission factors were used for the screen and all downstream equipment (fines crusher and conveyors), due to moisture carryover.

PM, PM\textsubscript{10}, and PM\textsubscript{2.5} emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42, Section 13.2.2 *Unpaved Roads* (November 2006). PM, PM\textsubscript{10}, and PM\textsubscript{2.5} emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42, Section 13.2.4 *Aggregate Handling and Storage Piles* (November 2006). PM, PM\textsubscript{10}, and PM\textsubscript{2.5} emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program’s Emissions Inventory Questionnaire Form 2.8 *Storage Pile Worksheet*.

Combustion emissions from the diesel generator set were calculated using emission factors taken from AP-42, Section 3.4 *Large Stationary Diesel and All Stationary Dual-Fuel Engines* (October 1996).

The following table provides an emissions summary for this project. Because this is a new installation, existing potential emissions and existing actual emissions do not exist. Potential emissions of the project represent the potential of the new equipment, assuming continuous operation (8,760 hours per year).

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Regulatory De Minimis Levels</th>
<th>Existing Potential Emissions</th>
<th>Existing Actual Emissions</th>
<th>Potential Emissions of the Project</th>
<th>Potential Emissions of the Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
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<td>N/A</td>
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<tr>
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<tr>
<td>PM\textsubscript{2.5}</td>
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<td>N/A</td>
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<tr>
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<tr>
<td>NO\textsubscript{x}</td>
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<td>N/A</td>
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<td>N/A</td>
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<tr>
<td>CO</td>
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<td>N/A</td>
<td>N/A</td>
<td>10.28</td>
<td>10.28</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>25.0</td>
<td>N/A</td>
<td>N/A</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

N/A = Not Applicable

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM are above the de minimis level but below the major source level. Potential emissions of all other pollutants are below their respective de minimis levels.
APPLICABLE REQUIREMENTS

Best Lime Manufacturing shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

• Start-Up, Shutdown, and Malfunction Conditions, 10 CSR 10-6.050

• Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110

• Restriction of Emission of Odors, 10 CSR 10-6.165

• Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170

• Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220

SPECIFIC REQUIREMENTS

• New Source Performance Regulations, 10 CSR 10-6.070
  ➢ Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO
    ➢ Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII

• MACT Regulations, 10 CSR 10-6.075
  ➢ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required, it is recommended that this permit be granted with special conditions.
PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 19, 2018, received July 19, 2018, designating Best Lime Manufacturing as the owner and operator of the installation.
APPENDIX A

Abbreviations and Acronyms

% .......... percent
°F .......... degrees Fahrenheit
acf m .......... actual cubic feet per minute
BACT ...... Best Available Control Technology
BMPs ...... Best Management Practices
Btu .......... British thermal unit
CAM ...... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS ...... Continuous Emission Monitor System
CFR .......... Code of Federal Regulations
CO .......... carbon monoxide
CO₂ .......... carbon dioxide
CO₂e .......... carbon dioxide equivalent
COMS ...... Continuous Opacity Monitoring System
CSR .......... Code of State Regulations
dscf ........ dry standard cubic feet
EIQ .......... Emission Inventory Questionnaire
EP .......... Emission Point
EPA .......... Environmental Protection Agency
EU .......... Emission Unit
fps .......... feet per second
ft .......... feet
GACT ...... Generally Available Control Technology
GHG .......... Greenhouse Gas
gpm .......... gallons per minute
gr .......... grains
GWP .......... Global Warming Potential
HAP .......... Hazardous Air Pollutant
hr .......... hour
hp .......... horsepower
lb .......... pound
lbs/hr .......... pounds per hour
MAC T ...... Maximum Achievable Control Technology
µg/m³ .......... micrograms per cubic meter
m/s .......... meters per second
Mgal .......... 1,000 gallons
MW .......... megawatt
MHDR .......... maximum hourly design rate
MMBtu .......... Million British thermal units
MMCF .......... million cubic feet
MSDS .......... Material Safety Data Sheet
NAAQS .......... National Ambient Air Quality Standards
NESHAPs .......... National Emissions Standards for Hazardous Air Pollutants
NOx .......... nitrogen oxides
NSPS .......... New Source Performance Standards
NSR .......... New Source Review
PM .......... particulate matter
PM₂.₅ .......... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ .......... particulate matter less than 10 microns in aerodynamic diameter
ppm .......... parts per million
PSD .......... Prevention of Significant Deterioration
PTE .......... potential to emit
RACT ...... Reasonable Available Control Technology
RAL .......... Risk Assessment Level
SCE .......... Source Classification Code
scfm .......... standard cubic feet per minute
SDS .......... Safety Data Sheet
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL .......... Screening Model Action Levels
SO₂ .......... sulfur oxides
SO₂ .......... sulfur dioxide
SSM .......... Startup, Shutdown & Malfunction
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
Dear Mr. Phillips:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and with your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: http://dnr.mo.gov/regions/. The online CAV request can be found at http://dnr.mo.gov/cav/compliance.htm.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/abc
If you have any questions regarding this permit, please do not hesitate to contact Ryan Schott, at the Department of Natural Resources’ Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:rsj

Enclosures

c: Southeast Regional Office
   PAMS File: 2018-07-035

Permit Number: 082018-013