

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

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:

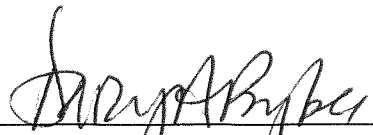
The installation of an agricultural lime production plant. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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
 - A. Best Lime Manufacturing shall install and operate water spray devices on the screen (EP-2).
 - 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: 08 2018 - 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.
- 40 CFR 60, Subpart OOO – *Standards of Performance for Nonmetallic Mineral Processing Plants* applies to all crushers/mills, screens, and conveyors.
- 40 CFR 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* apply to the diesel generator set.
- 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, PM₁₀, and PM_{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, PM₁₀, and PM_{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, PM₁₀, and PM_{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, PM₁₀, and PM_{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 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Project	Potential Emissions of the Installation
PM	25.0	N/A	N/A	34.50	34.50
PM ₁₀	15.0	N/A	N/A	13.56	13.56
PM _{2.5}	10.0	N/A	N/A	2.48	2.48
SO _x	40.0	N/A	N/A	0.02	0.02
NO _x	40.0	N/A	N/A	38.68	38.68
VOC	40.0	N/A	N/A	0.99	0.99
CO	100.0	N/A	N/A	10.28	10.28
Total HAPs	25.0	N/A	N/A	0.02	0.02

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

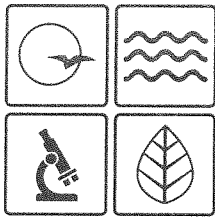
The following documents are incorporated by reference into this permit:

- 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	Mgal	1,000 gallons
°F	degrees Fahrenheit	MW	megawatt
acfm	actual cubic feet per minute	MHDR	maximum hourly design rate
BACT	Best Available Control Technology	MMBtu	Million British thermal units
BMPs	Best Management Practices	MMCF	million cubic feet
Btu	British thermal unit	MSDS	Material Safety Data Sheet
CAM	Compliance Assurance Monitoring	NAAQS	National Ambient Air Quality Standards
CAS	Chemical Abstracts Service	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CEMS	Continuous Emission Monitor System	NO_x	nitrogen oxides
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	carbon monoxide	NSR	New Source Review
CO₂	carbon dioxide	PM	particulate matter
CO_{2e}	carbon dioxide equivalent	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
COMS	Continuous Opacity Monitoring System	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
CSR	Code of State Regulations	ppm	parts per million
dscf	dry standard cubic feet	PSD	Prevention of Significant Deterioration
EIQ	Emission Inventory Questionnaire	PTE	potential to emit
EP	Emission Point	RACT	Reasonable Available Control Technology
EPA	Environmental Protection Agency	RAL	Risk Assessment Level
EU	Emission Unit	SCC	Source Classification Code
fps	feet per second	scfm	standard cubic feet per minute
ft	feet	SDS	Safety Data Sheet
GACT	Generally Available Control Technology	SIC	Standard Industrial Classification
GHG	Greenhouse Gas	SIP	State Implementation Plan
gpm	gallons per minute	SMAL	Screening Model Action Levels
gr	grains	SO_x	sulfur oxides
GWP	Global Warming Potential	SO₂	sulfur dioxide
HAP	Hazardous Air Pollutant	SSM	Startup, Shutdown & Malfunction
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		
m/s	meters per second		



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

AUG 20 2018

Mr. Greg Phillips
Co-Owner
Best Lime Manufacturing
18833 Laddie Lane
Winona, MO 65588

RE: New Source Review Permit - Project Number: 2018-07-035

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/ahc



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Mr. Greg Phillips
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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