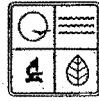


STATE OF MISSOURI



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: 032016 - 005

Project Number: 2015-12-001
Installation Number: 186-0001

Parent Company: Mississippi Lime Company

Parent Company Address: 3870 South Lindbergh Blvd, Ste. 200, St. Louis, MO 63127

Installation Name: Mississippi Lime Company

Installation Address: 16147 U.S. Highway 61, Ste. Genevieve, MO 63670

Location Information: Ste. Genevieve County, S29/30, T38N, R9E

Application for Authority to Construct was made for:

A modification of a stone screening and loadout system. This review was conducted in accordance with Section (5), 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.

Handwritten signature of Daronn A. Williams in cursive script.

Prepared by
Daronn A. Williams
New Source Review Unit

Handwritten signature of Kyna L. Moore in cursive script.

Director or Designee
Department of Natural Resources

Handwritten date "March 14, 2016" in cursive script.

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 start up 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 start up 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 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."

Mississippi Lime Company
Ste. Genevieve County, S29/30, T38N, R9E

1. Control Device Requirement-Baghouse
 - A. Mississippi Lime Company shall control emissions from the following equipment using a baghouse as specified in the permit application.
 - 1) EP-198A (Material transfer chute)
 - 2) EP-198B (Screen)
 - 3) EP-198C (Product Screw Conveyor)
 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - D. Mississippi Lime Company shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - E. Mississippi Lime Company shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. Mississippi Lime Company shall maintain an operating and maintenance log for the baghouse which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2015-12-001
Installation ID Number: 186-0001
Permit Number:

Installation Address:
Mississippi Lime Company
16147 U.S. Highway 61
Ste. Genevieve, MO 63670

Parent Company:
Mississippi Lime Company
3870 South Lindbergh Blvd, Ste. 200
St. Louis, MO 63127

Ste. Genevieve County, S29/30, T38N, R9E

REVIEW SUMMARY

- Mississippi Lime Company has applied for authority to modify a stone screening and loadout system.
- The application was deemed complete on December 1, 2015.
- None of the NESHAPs or currently promulgated MACT regulations apply to the proposed equipment.
- The Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* applies to the screen of this project (EP-198B)
- A baghouse is being used to control particulate emissions from following the equipment: EP-198A (Material Transfer Chute), EP-198B (Screen) and EP-198C (Product Screw Conveyor).
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM, PM₁₀ and PM_{2.5} are below de minimis levels. However, since the uncontrolled potential PM₁₀ emissions exceed the 1.0 pound per hour insignificant emission exemption level of 10 CSR 10-6.061(3)(A)3.A., a construction permit is required.
- This installation is located in Ste. Genevieve County, an attainment area for all criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as item number 11, *Lime plants*. The installation's major source level is 100 tons per year, and fugitive emissions are counted toward major source applicability.

- Emissions testing is not required for the equipment of this project.
- An amendment to your Part 70 Operating Permit is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Mississippi Lime Company is a lime processing plant that is located near Ste. Genevieve, Missouri in Ste. Genevieve County. The installation is a major source for construction permit purposes and a Part 70 (Title V) source for operating permit purposes. The installation produces lime, which is a product of the calcination of limestone. Mississippi Lime Company currently holds a Part 70 operating permit number OP2013-035. The following construction permits have been issued to Mississippi Lime Company from the Air Pollution Control Program:

The following New Source Review permits have been issued to Mississippi Lime Company from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
072015-011	New lime milling system and lime screening system
082014-010	Temporary crushing operation.
042014-003	Temporary mine screening operation.
122013-009A	Amended emission calculations.
122013-009	A Section (5) permit issued on December 30, 2015 for the modification of three (3) existing kilns.
102013-009	Temporary portable crusher and screening operation.
072013-007	Temporary mine crushing operation.
112012-009B	Amended test conditions.
112012-009A	Amended two emission units and haul road at lime hydrating plant.
112012-009	A Section (5) permit issued on November 19, 2012 for a new lime hydrating plant.
082011-002	A Section (5) permit issued on July 5, 2011 for hydration process.
042010-010	A Section (5) permit issued on April 16, 2010 for a transfer loading station to transfer finished lime product to temporary storage.
042009-001	A Section (5) permit for new limestone crushing, screening, and conveying equipment for the underground mine
072004-012	Vertical kilns-(netting).
052003-045	A Section (5) permit issued on May 2, 2003, for a new lime hydrator.
122002-007	A Section (8) permit for two (2) new Rotary Lime Kilns.
102002-008	A Section (5) permit issued on October 7, 2002, for a lime handling system.
082002-004	A Section (5) permit issued on August 9, 2002, for a new railcar transloading system.
092001-014	A Section (5) permit issued on September 19, 2001, for a new Vertical Kiln plant with supporting equipment.

Permit Number	Description
112001-005	A Section (5) permit issued on November 6, 2001, for a new bagging operation.
052001-003	A Section (5) permit issued on May 4, 2001, to add two (2) additional hydrated lime storage silos, two (2) additional truck load out systems and one (1) additional rail load out system.
0999-009	A Section (3) Temporary Permit issued on September 14, 1999, to reclaim and remediate waste storage piles. Permit Expiration Date: July 31, 2001.
0799-015	A Section (5) permit issued on July 20, 1999, to revise Permit No. 0679-002 to account for increased potential emissions.
1198-020	A Section (5) permit issued on November 24, 1998, for a modification to the rotary kiln load out system.
0898-019	A Section (5) permit issued on August 17, 1998, for construction of a Maerz natural gas fired vertical lime kiln and ancillary equipment.
0198-006	A Section (5) permit issued on January 8, 1998, for the addition of a pneumatic conveying system from the Rotary Hydrate Plants No. 2 & No. 3 to Rotary Hydrate Plant No. 1.
0997-015	A Section (5) permit issued on September 11, 1997, for modifications to the lime handling and blending system at the Peerless Plant.
0897-035	A Section (5) permit issued on August 26, 1997, to amend Permit No. 0292-010A for a natural gas fired Maerz Vertical Lime Kiln to include an ancillary limestone feed and limestone processing system.
0897-018	A Section (5) permit issued on December 2, 1997, to replace an existing natural gas fired burner of the precipitated calcium carbonate system (MRPCC-2) with a larger burner.
0897-017	A Section (5) permit issued on August 20, 1997, for an underground limestone crushing operation.
0395-008	A Section (5) permit issued on February 10, 1995, to construct a new hydrate bulk bagging system.
0794-014	A Section (5) permit issued on July 20, 1994, to construct a Fuller pneumatic conveying system to convey precipitated calcium carbonate (PPC) from PPC Plant No. 1 to PPC Plant No. 2.
0292-010	A Section (5) permit issued on February 1, 1992, for the addition of a new natural gas fired Maerz Vertical Lime kiln.
1090-006	A Section (5) permit issued on October 11, 1990, for the addition of two (2) storage silos for lime hydrate.
0889-013	A Section (5) permit issued on August 30, 1989, to add a calcium carbonate slurry operation.
0588-008A	A Section (5) permit issued on May 31, 1988, for a milling operation.
1086-005A	A Section (5) permit issued on October 1, 1986, to construct a precipitated calcium carbonate plant (MRPCC-2).
0284-008A to 010A	A Section (5) permit issued on February 21, 1984, to construct a rotary hydrator (MRH-3).
0480-006	A Section (8) permit issued on April 1, 1980, to construct two (2) rotary lime kiln systems.
0679-002	A Section (5) permit issued on June 6, 1979, for various crushing, conveying, storage and loading equipment.

PROJECT DESCRIPTION

Mississippi Lime Company has applied for authority to modify a stone screening and loadout system that processes finely crushed limestone. Because the uncontrolled potential PM₁₀ emissions exceed the 1.0 pound per hour insignificant emission exemption level of 10 CSR 10-6.061(3)(A)3.A., a construction permit is required.

The screen of this project (EP-198B) is being modified and an increase in its MHDR is expected to increase from [REDACTED] tons per hour to [REDACTED] tons per hour. The material transfer chute (EP-198A), screen (EP-198B) and product screw conveyor (EP-198C) are located and operates in an enclosed building with four sides and a roof, minimum cross drafts are expected and all emissions will be vented to a baghouse that operates under negative pressure. A portion of the collected particulate emissions will be reclaimed and reintroduced back into the system. The entire system is powered by electricity.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Emissions from EP-198A (material transfer chute), EP-198C (product screw conveyor), EP-198D (truck loadout), EP-198E (off-size material transfer chute), and EP-198F (dust collector reclaim) were calculated using [REDACTED]. Mississippi Lime Company elected to use this method because it rated much higher than [REDACTED] and wind will not be a substantial contributing factor due to the equipment operating in an enclosed building with four sides and a roof. Emissions from EP-198B (screen) were calculated using fines screening factor found in [REDACTED].

All emissions from EP-198A , EP-198B and EP-198C will be controlled by [REDACTED]. Based on conservative engineering judgement, a [REDACTED] capture rate and a [REDACTED] control efficiency was used to calculate emissions from these sources. Additional storage pile and haul road emissions are not expected from this project.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Construction Permit 072015-011. Existing actual emissions were taken from the installation's 2014 EIQ. Potential emissions of the application represent the potential of the modified equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Uncontrolled Potential Emissions of the Project	Controlled Potential Emissions of the Project
PM	25.0	>250.0	N/D	23.0	10.8
PM ₁₀	15.0	>250.0	1,301.20	7.2	4.1
PM _{2.5}	10.0	>250.0	592.49	4.30	1.45
SO _x	40.0	>250.0	3,285.07	N/A	N/A
NO _x	40.0	>250.0	3,850.18	N/A	N/A
VOC	40.0	>250.0	33.33	N/A	N/A
CO	100.0	>250.0	13,445.09	N/A	N/A
HAPs	10.0/25.0	>25.0	28.46	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM, PM₁₀ and PM_{2.5} are below de minimis levels. However, since the uncontrolled potential PM₁₀ emissions exceed the 1.0 pound per hour insignificant emission exemption level of 10 CSR 10-6.061(3)(A)3.A., a construction permit is required.

APPLICABLE REQUIREMENTS

Mississippi Lime Company 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *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
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070
 - *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 CFR Part 60, Subpart OOO applies to the screen of this project (EP-198B)

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), 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 November 24, 2015, received December 1, 2015, designating Mississippi Lime Company as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

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

Mr. Jonathan Kennedy
Environmental & Regulatory Affairs Manager
Mississippi Lime Company
16147 U.S. Highway 61
Ste. Genevieve, MO 63670

RE: New Source Review Permit - Project Number: 2015-12-001 and 2015-12-002

Dear Mr. Kennedy:

Enclosed with this letter are your permits to construct – both the public version and the confidential version. 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, your new source review permit application and with your amended operating permit 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.

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.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, 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:dws

Enclosures

c: Southeast Regional Office
PAMS File: 2015-12-001

Permit Number: