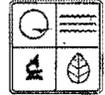


STATE OF MISSOURI



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: **112012-009** Project Number: 2012-08-055
Installation Number: 186-0001

Parent Company: Mississippi Lime Company

Parent Company Address: 3870 South Lindbergh Boulevard, Suite 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, T38N, R9E

Application for Authority to Construct was made for:
The installation of a lime hydrating plant and its associated conveying, milling, screening, storage, and loadout equipment. 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.

NOV 19 2012

EFFECTIVE DATE

Kyra L Moore

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

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 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 Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' 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 sources(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 at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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Permit No.	
Project No.	2012-08-055

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, T38N, R9E

1. Control Device Requirement-Baghouses
 - A. Mississippi Lime Company shall control particulate emissions from the emission units in Appendix B which are stated as having baghouses by enclosing and venting each particulate emission source listed in Appendix B to a baghouse. The enclosures of the emissions units shall be constructed and maintained such that no visible emissions are allowed to occur from these sources except through the gases exiting from the baghouse.
 - B. The baghouses 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 the Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the baghouses 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. On the days when the equipment is running, Mississippi Lime Company shall conduct a daily examination on the baghouses listed in Appendix B. This shall be completed during the daily workplace examinations. During the examination, the person completing the workplace exam shall visually inspect and record that all emission control devices are working as per manufacturer's guidelines.
 - E. Mississippi Lime Company shall monitor and record the operating pressure drop across the baghouses listed in Appendix B at least once per week. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

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Permit No.	
Project No.	2012-08-055

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- F. Mississippi Lime Company shall submit manufactures performance specifications for the baghouses listed in Appendix B within 30 days of equipment start-up.
 - G. If at any time the baghouses listed in Appendix B do not operate within the manufactures performance specifications Mississippi Lime Company shall perform an EPA Method 22 visible emission test. If any visible emissions are present during the EPA Method 22 test Mississippi Lime Company shall implement an immediate corrective action to eliminate any excess emissions from the affected stack and report the incident on the next Mississippi Lime Company Title V Semi-Annual Report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102.
 - H. Mississippi Lime Company shall maintain an operating and maintenance log for the baghouses 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.
2. Control Device Requirement- DCLS Pneumatic Loadout Spout and Filter
- A. Mississippi Lime Company shall control emissions from the product loading emission point (EP-944 and 951) using a Dust Control and Loading System Inc.'s (DCLS) pneumatic loadout spout equipped with filters.
 - B. The DCLS pneumatic loadout spout and filters shall be operated and maintained in accordance with the manufacturer's specifications. The filters 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 the Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the DCLS pneumatic loadout spout shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

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Permit No.	
Project No.	2012-08-055

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. On the days when the equipment is running, Mississippi Lime Company shall conduct a daily examination on the DCLS pneumatic loadout spout. This shall be completed during the daily workplace examinations. During the examination, the person completing the workplace exam shall visually inspect and record that all emission control devices are working as per manufacturer's guidelines.
 - E. Mississippi Lime Company shall monitor and record the operating pressure drop across the DCLS pneumatic loadout spout at least once per week. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - F. Mississippi Lime Company shall maintain an operating and maintenance log for the DCLS pneumatic loadout spout 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.
3. Control Measure – Capture Efficiency (100%)
- A. Emission units listed in Appendix B as having indirect baghouse control shall be totally enclosed and maintained under negative pressure and vented to its respective baghouse.
 - B. If any openings or holes should appear on emission units listed in Appendix B as having indirect baghouse control due to wear or maintenance activities these openings or holes shall maintain negative pressure.
 - C. Mississippi Lime Company shall demonstrate negative pressure at all emission units listed in Appendix B as having indirect baghouse control by using visual indicators such as streamers, talc puff test, negative pressure gauges, flags, etc. at openings that are not closed during normal operations. All openings, when operating, must indicate the presence of negative pressure for compliance.
 - D. Mississippi Lime Company shall maintain an operating and maintenance log for the storage equipment and process equipment which shall include the following:

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Permit No.	
Project No.	2012-08-055

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- 1.) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions.
 - 2.) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - 3.) A record of regular inspection schedule, the date and results of all inspections, including any actions or maintenance activities that result from the inspections. Either paper copy or electronic formats are acceptable.
4. Record Keeping and Reporting Requirements
- A. Mississippi Lime Company shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include MSDS for all materials used.
 - B. Mississippi Lime Company shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of the emission rates listed in Table 1.
5. Performance Testing
- A. Mississippi Lime Company shall conduct performance testing on the baghouses listed below in order to verify that the emission rates in Table 1 for PM are not exceeded. The following conditions shall be measured and recorded,
 - 1) The filters' filterable PM emission factor in grains per standard cubic feet per minute (gr/SCFM) using methods preapproved by the Air Pollution Control Program
 - 2) The filters' respective flowrate in dry SCFM using methods preapproved by the Air Pollution Control Program
 - 3) The filters' respective pressure drop in inches of water column
 - 4) The filters' respective emission rate, lbs/hr
 - 5) Process material throughput, tph

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Permit No.	
Project No.	2012-08-055

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Table 1: Emission Rates from the Baghouses

Baghouse	Controlled Emission Points	MHDR (tph)	Controlled PM Emission Rates (lb/hr)
DC-922	EP-921 and 922	50	1.545
DC-931	EP-930, 931, and 932	35	1.537
DC-936	EP-936, 937, 938, 939, 940, 941, and 942	35	1.164

- B. These tests shall be performed within 60 days after achieving the maximum production rate of the installation, but not later than 180 days after initial start-up of the Hydrator (HDY-1) for commercial operation. These tests shall be conducted at the MHDR listed in Table 1 or within 10 percent of the MHDR. If the tests are conducted below 90 percent of the MHDR, then the tested production rate is the new MHDR. If the tested production rate is below 90 percent, Mississippi Lime Company shall be allowed to operate at 10 percent above the tested production rate and not have to retest. These tests shall be conducted in accordance with the Performance Test Procedures outlined in Special Condition 5.A.
- C. If at any time the tested production rates during the most recent performance test are exceeded by 10 percent, Mississippi Lime Company must retest the exceeding emission point to confirm the emission rates listed in Table 1 are not exceeded.
- D. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
- E. Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required

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Permit No.	
Project No.	2012-08-055

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.

- F. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
- G. If the results of the performance testing show that the tested emission rates are greater than the stack emission rates (Table 1), then Mississippi Lime Company shall evaluate what effects these higher emission rates would have had on the permit applicability, modeling applicability, and emission factors for compliance and emission inventory. Mississippi Lime Company shall submit to the Air Pollution Control Program the results of any such evaluation in a completed Application for Authority to Construct within 30 days of submitting the Performance Test Results report required in Special Condition 4.E of this permit.

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

Project Number: 2012-08-055
Installation ID Number: 186-0001
Permit Number:

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

Complete: May 21, 2012

Parent Company:
Mississippi Lime Company
3870 South Lindbergh Boulevard, Suite 200
St. Louis, MO 63127

Ste. Genevieve County, S29, T38N, R9E

REVIEW SUMMARY

- Mississippi Lime Company has applied for authority to install a lime hydrating plant and its associated conveying, milling, screening, storage, and loadout equipment.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR 60 Subpart HH, "Standards of Performance for Lime Manufacturing Plants" applies to the source but does not apply to the proposed equipment in this project.
- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" does not apply to the proposed equipment in this project as the calcium oxide or calcium hydroxide are not listed as nonmetallic minerals covered by this subpart.
- 40 CFR 63, Subpart AAAAA, "National Emission Standard for Hazardous Air Pollutants for Lime Manufacturing Plants", applies to the source but not to the proposed equipment because the processed stone handling requirements apply to the limestone feed prior to the kiln and do not apply to the finished lime product.
- Baghouses and a DCLS Pneumatic Loadout Spout and Filter are being used to control the PM, PM₁₀, and PM_{2.5} emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are below de minimis levels but above the insignificant emission exemption levels found in 10 CSR 10-6.061, (3)(A).
- 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.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing are required for the equipment.
- A Part 70 Operating Permit amendment request 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 calcinations of limestone. Mississippi Lime Company currently holds Part 70 operating permit number OP2002-018. The following construction permits have been issued to Mississippi Lime Company from the Air Pollution Control Program.

Table 2: Previously Issued Construction Permits

Permit Number	Description
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.
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.

Permit Number	Description
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 is installing a new lime hydration facility at their Ste. Genevieve facility. The new equipment being installed includes lime hydration equipment and it associated conveying, milling, screening, storage, and loadout equipment. Hydration is a process whereby approximately stoichiometric amounts of water and lime react to form a product, hydrate, which is a dry powder; i.e. it contains less than 1% free moisture and is handled as a powder.

EMISSIONS/CONTROLS EVALUATION

The emission factors used for the transfer emission points were calculated using the drop point equation from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.4 *Aggregate Handling and Storage Piles* (November 2006). According to AP-42, Chapter 11.17 "Lime Manufacturing" (February 1998) the predictive drop-point equation provided in AP-42, Chapter 13.2.4 "Aggregate

Handling and Storage Piles" (November 2006) is the recommended method for estimating material handling emissions for lime product. Therefore, the potential emissions of PM, PM₁₀ and PM_{2.5} were calculated using the drop point equation for aggregate storage piles. This equation accounts for moisture content and wind speed to develop an emission factor. The moisture content of lime is expected to be very low. Therefore the moisture content of limestone (0.2 percent) was used as it is considered conservatively high for the drop-point equation. A minimal wind speed was assumed (1.3 miles per hour) as all of the drop-points are enclosed with ductwork. Each transfer emission point was given a 99% control efficiency for PM, PM₁₀ and PM_{2.5} as they are being controlled by a baghouse. This control efficiency was obtained from AP-42, Appendix B.2 "Generalized Particle Size Distributions" (September 1996).

The emission factors for the impact crusher and mills were obtained from AP-42 Section 11.19.2 *Crushed Stone Processing and Pulverized Mineral Processing* (August 2004). The emission factor for the fine crusher in this section was chosen as the most representative emission factor for this process. The impact crusher and mills are also being controlled by a baghouse however no control efficiency was given to these emission units as the emission factors used are considered controlled emission factors.

The emission factors used for the air separators were obtained from a stack test submitted by Mississippi Lime Company. The average PM emission rates from the stack test came out to be 0.013 pounds per hour. To be conservative a safety factor was applied to the emission factors when calculating the potential emissions from the air separators.

Per the special conditions of this permit Mississippi Lime Company shall conduct stack testing on their emission points controlled by DC-922, DC-931 and DC-936 to confirm the emission factors used in the permit analysis.

The emission factors for the truck loadout of the hydrated lime were obtained from AP-42 Section 11.17 *Lime Manufacturing* (February 1998). The emission factor used was for PM and is considered uncontrolled. To calculate the potential emissions of PM₁₀ and PM_{2.5} it was assumed that 50% of the PM to be PM₁₀ and 25% of the PM to be PM_{2.5}. A 99% control efficiency was given for PM, PM₁₀ and PM_{2.5} as the loadout process is pneumatic and the displaced air is controlled by a fabric filter.

Quicklime is the feedstock of the hydrated lime process. Mississippi Lime Company produces its own quicklime to feed the hydration process. This project does not allow Mississippi Lime Company to increase the production of quicklime or essentially debottleneck the quicklime production line. It is expected that the same amount of total product in tons will be shipped from Mississippi Lime Company whether it be as quicklime or hydrated lime. The truck loading emission point for the quicklime is at the same location as the truck loadout for the hydrated lime within the Mississippi Lime Company facility. With the same amount of total product expected to be shipped no increase in haul road emissions would occur, therefore no haul road emissions were calculated for this project.

The following table provides an emissions summary for this project. Existing potential emissions were taken from construction permit #082011-002. Existing actual emissions were taken from the installation's 2011 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/D	N/D	22.41	>250.0
PM ₁₀	15.0	10646.4	1711.72	11.29	>250.0
PM _{2.5}	10.0	N/D	579.88	5.08	>250.0
SO _x	40.0	>250	3536.36	N/A	>250.0
NO _x	40.0	7154.52	3630.41	N/A	>250.0
VOC	40.0	392.56	53.80	N/A	>250.0
CO	100.0	>250	12394.15	N/A	>250.0
HAPs	10.0/25.0	38.29	29.26	N/A	>25.0

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.

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

- *Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400*

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*, I recommend this permit be granted with special conditions.

Gerad Fox
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 21, 2012, received May 24, 2012, designating Mississippi Lime Company as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

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 Sheets
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
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	tpy	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compounds
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Appendix B: Emission Unit Summary
Mississippi Lime Company
Ste. Genevieve County, S29, T38N, R9E
Project Number: 2012-08-055
Installation Number: 186-0001

Emission Point	Description	Control Device No.	Description
EP-910	Drop Point (Granular Silo (EP-677) to SF-1)	DC-693	Baghouse (Indirect)
EP-911	Drop Point (1/2 " Silo (EP-674) to SF-2)	DC-693	Baghouse (Indirect)
EP-912	Drop Point (SF-1 to BC-1)	DC-693	Baghouse
EP-913	Drop Point (SF-2 to BC-1)	DC-693	Baghouse
EP-914	Drop Point (BC-1 to CR-1)	DC-915	Baghouse
EP-915	Impact Crusher CR-1	DC-915	Baghouse
EP-916	Drop Point (CR-1 to M-1)	DC-915	Baghouse (Indirect)
EP-917	Mill M-1	DC-915	Baghouse (Indirect)
EP-918	Drop Point (M-1 to SC-1)	DC-915	Baghouse (Indirect)
EP-919	Drop Point (SC-1 to BE-1)	DC-915	Baghouse
EP-920	Drop Point (BE-1 to SC-2)	DC-915	Baghouse
EP-921	Drop Point (SC-2 to AC-1)	DC-922	Baghouse
EP-922	Air Separator AC-1	DC-922	Baghouse
EP-923	Drop Point (AC-1 to SC-3)	DC-928	Baghouse (Indirect)
EP-924	Drop Point (AC-1 to BLW-1)	DC-928	Baghouse (Indirect)
EP-925	Drop Point (SC-3 to BE-2)	DC-928	Baghouse
EP-926	Drop Point (BE-2 to SC-4)	DC-928	Baghouse
EP-927	Drop Point (SC-4 to BN-1)	DC-928	Baghouse
EP-928	Drop Point (BN-1 to WB-1)	DC-928	Baghouse
EP-929	Drop Point (WB-1 to SC-5)	DC-928	Baghouse
EP-930	Drop Point (SC-5 to HYD-1)	DC-931	Baghouse
EP-931	Hydrator HYD-1	DC-931	Baghouse
EP-932	Drop Point (HYD-1 to SC-6))	DC-931	Baghouse
EP-933	Drop Point (SC-6 to BE-3)	DC-934	Baghouse
EP-934	Drop Point (BE-3 to SC-7)	DC-934	Baghouse (Indirect)
EP-935	Drop Point (SC-7 to AC -2)	DC-934	Baghouse
EP-936	Air Separator AC-2	DC-936	Baghouse
EP-937	Drop Point (AC-2 to SC-9)	DC-936	Baghouse
EP-938	Drop Point (AC-2 to M-2)	DC-936	Baghouse (Indirect)
EP-939	Mill M-2	DC-936	Baghouse (Indirect)
EP-940	Drop Point (M-2 to SC-8)	DC-936	Baghouse (Indirect)
EP-941	Drop Point (SC-9 to SC-8)	DC-936	Baghouse (Indirect)
EP-942	Drop Point (SC-8 to BLW-2)	DC-936	Baghouse (Indirect)

EP-943	Drop Point (BLW-2 to BN-2)	DC-943	Baghouse
EP-944	Product Loadout LO-1	DCL	DCL (Pneumatic Loading with Filter)
EP-945	Drop Point (BLW-2 to BN-3)	DC-945	Baghouse
EP-946	Drop Point (BN-3 to WB-2)	DC-951	Baghouse (Indirect)
EP-947	Drop Point (WB-2 to SC-10)	DC-951	Baghouse (Indirect)
EP-948	Drop Point (SC-10 to M-3)	DC-951	Baghouse (Indirect)
EP-949	Mill M-3	DC-951	Baghouse (Indirect)
EP-950	Drop Point (M-3 to BN-4)	DC-951	Baghouse (Indirect)
EP-951	Product Loadout LO-2	DCL	DCL (Pneumatic Loading with Filter)

Ms. Kimberly Lagomarsino
Director - Environmental Affairs
Mississippi Lime Company
3870 South Lindbergh Boulevard, Suite 200
St. Louis, MO 63127

RE: New Source Review Permit - Project Number: 2012-08-055

Dear Ms. Lagomarsino:

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, 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 have any questions regarding this permit, please do not hesitate to contact Gerad Fox, 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:gfl

Enclosures

c: Southeast Regional Office
PAMS File: 2012-08-055

Permit Number: