

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

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APR 15 2014

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

RE: New Source Review Temporary Permit Request - Project Number: 2014-03-040

Installation ID Number: 186-0001

Temporary Permit Number: **042014-003**

Expiration Date: July 15, 2014

Dear Mr. Kennedy:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to install a temporary screening operation at Mississippi Lime Company, located in Ste. Genevieve, Missouri. The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location in accordance with Missouri State Rule 10 CSR 10-6.060(3).

Mississippi Lime Company (MLC) recently had a conveyor collapse in their underground mine. In order to avoid down time in their process MLC has requested to install a temporary screening operation to produce feedstock for the lime manufacturing plant while the collapsed conveyor is being repaired.

Crushed rock from the existing mining operations will be hauled out of the mine by truck (TEMP HR3 and HR4) and stockpiled (TEMP SP2) next to the temporary screen plant (TEMP 25). The temporary screen plant has a maximum hourly design rate of 400 tons of rock screened per hour. The rock will be transferred (TEMP 24) to the screen hopper via a front end loader. The rock will then be processed by the screen and conveyed (TEMP 26 and 27) to the stone shed to be processed further by the existing lime manufacturing plant. Approximately 10 percent of the screened rock will be considered oversized and transferred via a conveyor to an oversized stock pile (TEMP SP3). The oversized material will be transferred (TEMP 28) into a haul truck via a front end loader and hauled (TEMP HR5 and HR6) back into the mine to the existing crushing operation.

The screen and conveyors are powered by a diesel engine. However, the screen is a track mounted unit where the engine is used to operate the equipment and propel the unit, therefore, it is considered a non-road engine in accordance with 40 CFR §89.2.

The emission factors used in the analysis of the rock handling equipment were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42), Chapter 11.19.2, *Crushed Stone Processing and Pulverized Mineral Processing*, (8/2004). The controlled emission factors were used in this case as the moisture content of the rock coming out of the mine is greater than 1.5 percent moisture and the screen will be controlled by wet spray bars. MLC is required in their Title V operating permit (OP2013-035) to test the moisture content of rock from the underground mine and supply moisture content testing results showing the moisture content greater than 1.5 percent moisture by weight so additional testing is not required.

The emission factors for storage pile handling were calculated using the drop point equation found in AP-42, Section 13.2.4 *Aggregate Handling and Storage Piles* (November 2006). The vehicular activity and haul road emissions were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency for particulate matter (PM) and particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) and a 40% control efficiency for fine particulate matter (PM_{2.5}) were applied to the emission calculations for the use of chemical suppressant on the haul roads and vehicular activity areas. Potential emissions from the diesel were not considered for this project as it is considered a non-road engine.

The potential emissions of this temporary activity based on 8760 hours of operation of above the de minimis level for PM and PM₁₀. All criteria pollutant are at the de minimis level based on 2376 hours of operation, which is the maximum hours of operation the temporary screening operation can operate until the temporary permit expires, therefore this project would not considered a major modification under prevention of significant deterioration review. Below is a summary of the potential emissions of this project.

| Air Pollutant | De Minimis Level | Potential Emissions of the Application | *Conditioned Potential Emissions |
|-------------------|------------------|--|----------------------------------|
| PM | 25.0 | 85.64 | 23.23 |
| PM ₁₀ | 15.0 | 33.52 | 9.09 |
| PM _{2.5} | 10.0 | 9.53 | 2.58 |

*Conditioned Potential Emissions based on continuous operation until the expiration of the temporary permit or 2376 hours of operation.

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You are still obligated to meet all applicable air pollution control rules, Missouri Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.045, *Open Burning Requirements*, 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.165, *Restriction of Emission of Odors* and 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*.

A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please do not hesitate to contact Gerad Fox at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Kyra L. Moore
Director

KLM:gfl

c: PAMS File: 2014-03-040
Southeast Regional Office

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GENERAL 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."

Site ID Number: 186-0001

Site Name: Mississippi Lime

Site Address: 16147 U.S. Highway 61

Site County: Ste. Genevieve (S29, T38N, R9E)

1. **Best Management Practices Requirement**
Mississippi Lime Company shall control fugitive emissions from the temporary haul roads (TEMP HR3, HR4, HR5 and HR6) and outside vehicular activity areas (TEMP SP2 and SP3) used by the temporary screen by performing Best Management Practices as defined in Attachment AA.
2. **Wet Suppression Control System Requirement**
 - A. Mississippi Lime Company shall install and operate wet spray devices on temporary screen (TEMP 25).
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Mississippi Lime Company shall adjust the production rate to control emissions from these units. Mississippi Lime Company shall record a brief description of such events
3. **Record Keeping Requirement**
Mississippi Lime Company shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.
4. **Reporting Requirement**
Mississippi Lime Company shall report to the Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of the limitations imposed by this permit.

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the portable plant is operating.

1. Pavement
 - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions¹ while the plant is operating.
 - B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants
 - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five years and make these records available to Department of Natural Resources' personnel upon request.

3. Application of Water-Documented Daily
 - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - C. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
 - E. The operator shall keep these records with the plant for not less than five years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

¹For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)