



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

DEPARTMENT OF NATURAL RESOURCES

PERMIT BOOK

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OCT 23 2014

Mr. James Nicholson
Senior Environmental Engineer
Martin Marietta Aggregates - Greenwood Quarry
15719 South Airport Road
Greenwood, MO 64034

RE: New Source Review Temporary Permit Request - Project Number: 2014-08-045
Installation ID Number: 037-0001
Temporary Permit Number **102014-013**
Expiration Date: January 31, 2015

Dear Mr. Nicholson:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to operate a portable crusher at Martin Marietta Aggregates - Greenwood Quarry, located in Greenwood, 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).

Martin Marietta Aggregates - Greenwood Quarry is locating a portable crusher with a MHDR of 500 tons per hour to their existing quarry to alleviate the back log that needs produced by the end of the year. Aggregate will be loaded into the crusher's hopper by a front-end loader, processed to size, and conveyed into finished storage piles. The portable crusher consists of a hopper, grizzly feeder, crusher, screen, various internal conveyors, and a discharge conveyor. The crusher and screen are powered by diesel engines. However, the engines meet the definition of non-road and were not evaluated in this review.

Haul roads were included in the calculations and BMPs will be used for the duration of this project.

Martin Marietta Aggregates - Greenwood Quarry is authorized to construct and operate subject to the following special conditions:

1. Application of Water-Documented Daily

- a. Martin Marietta Aggregates - Greenwood Quarry 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. Martin Marietta Aggregates - Greenwood Quarry shall record the date and volume of water application 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. Martin Marietta Aggregates - Greenwood Quarry 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

2. Moisture Content Testing Requirement

- a. Martin Marietta Aggregates - Greenwood Quarry shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent by weight.
- b. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
- c. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
- d. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
- e. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Martin Marietta Aggregates - Greenwood Quarry main office within 30 days of completion of the required test.

- f. If the moisture content of either of the two tests is less than the moisture content in Special Condition 2.A, another test may be performed within 15 days of the noncompliant test. If the results of that test also exceed the limit, Martin Marietta Aggregates - Greenwood Quarry shall either:
 - i. Apply for a new permit to account for the revised information, or
 - ii. Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
 - g. In lieu of testing, Martin Marietta Aggregates - Greenwood Quarry may obtain test results that demonstrate compliance with the moisture content in Special Condition 2.A from the supplier of the aggregate.
3. Martin Marietta Aggregates – Greenwood Quarry shall operate from the hours of 6:00 a.m. to 6:00 p.m. according to the Cass County ordinance.
4. Once the aggregate is crushed, the portable crusher shall be removed from this site, in any case, no later than January 31, 2015.

Permission to operate the portable crusher at this site is granted for the time period between October 15, 2014 and January 31, 2014. There is a county ordinance in Cass County that only allows operation of the quarry from 6:00 a.m. to 6:00 p.m. resulting in a limited 12 hour work day. Therefore, ambient impact analysis and annual potential emissions were calculated on a 12 hour work day. Potential emissions for this project are summarized in Table 1 below:

Table 1: Potential Emissions Summary (tons)

PM	PM ₁₀	PM _{2.5}
14.71	4.51	1.98

The ambient impact was calculated to be 14.77 μm^3 with an additional 20.0 μm^3 background for haul road and vehicular activity.

Given that the potential emissions are well below 100 tons for each pollutant, and ambient air quality standards are expected to be maintained, the proposed temporary permit is granted according to the provisions of Missouri State Rule 10 CSR 10-6.060(3). Subsequent notification should be made to the Air Pollution Control Program within two weeks once the portable crusher (PORT-0527) is no longer located at the facility.

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Emissions for the project were calculated using emission factors found in the United States Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42). Emissions from the rock-crushing equipment were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. You are still obligated to meet all applicable air pollution control rules, 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*, 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, and 10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes*. New Source Performance Standards (NSPS) apply to the installation. 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.

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 Kathy Kolb at the departments' 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:kkf

c: PAMS File: 2014-08-045
Kansas City Regional Office