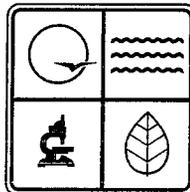


STATE OF MISSOURI

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: **06 2007 - 007** Project Number: **2006-11-037**
 Owner: **Lafarge North America, Inc.** **093-0026**
 Owner's Address: **15100 E. Courtney Atherton Road, Sugar Creek, MO 64058**
 Installation Name: **Graniteville Red Quarry**
 Installation Address: **North of Missouri Route 21 on Iron County #96, Graniteville, MO 63650**
 Location Information: **Iron County, S10/11, T34N, R3E**

Application for Authority to Construct was made for:

The modification of an existing rock-crushing plant. The rock-crushing plant is adding a 310 hp diesel engine to power its primary crusher. 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 (listed as attachments starting on page 2) are applicable to this permit.

JUN 13 2007

EFFECTIVE DATE

James Kavanagh
 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. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-11-037
093-0026

Lafarge North America, Inc.

15100 E. Courtney Atherton Road, Sugar Creek, MO 64058

Graniteville Red Quarry

North of Missouri Route 21 on Iron County #96, Graniteville, MO 63650

Iron County, S10/11, T34N, R3E

The modification of an existing rock-crushing plant. The rock-crushing plant is adding a 310 hp diesel engine to power its primary crusher. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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Project No.	2006-11-037

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); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.

1. **Restriction on the Use of Diesel Engine(s)/Generator(s)**
The rock-crushing plant shall only operate its diesel engine during warm-up periods before production and while powering its equipment during production.
2. **Annual Emission Limit of Nitrogen Oxides**
 - A. The operator(s) shall ensure that Lafarge North America's rock-crushing plant emits less than 40 tons of NOx into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a monthly record of material processed and the resulting NOx emissions. Attachment A, *Monthly NOx Emissions Tracking Record*, or other equivalent forms, shall be used for this purpose.
3. **Superseding Condition**
Special Condition #1 in this permit supersedes Special Condition #7 in the previously issued construction permit (072006-007, Project #2006-05-040) from the Air Pollution Control Program.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Lafarge North America Inc. is proposing to add a 310 hp diesel engine to its existing stationary rock-crushing plant, 093-0026, located at Graniteville Red Quarry (S10/11, T34N, R3E). This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is located in Iron County, an attainment area for all criteria air pollutants.

Table 1. Other Permits Issued for Site 093-0026

Permit Number	Completed	Description
082001-015	8/16/2001	Construction of new crushing plant.
012002-001	1/4/2004	Addition of equipment
072006-007	7/24/2006	Addition of equipment.

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutants of concern are Nitrogen Oxides (NO_x). The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, appropriate emission factors, control device efficiencies, and the limiting operating hours at MHDR. The sources of the emission factors and control efficiencies are listed in the section "Permit Documents". Based on the conditioned potential emissions, the operation is considered a *de minimis* source under 10 CSR 10-6.060 section (5).

The rock-crushing plant has an annual emission limit of less than 40 tons of NO_x in any 12-month period. A composite NO_x emission factor was developed for the rock-crushing plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment A.

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory <i>De Minimis</i> Levels	*Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Project	**New Project Conditioned Potential	Emission Factor (lb/ton)
PM ₁₀	15.0	76.78	2.32	3.06	2.81	N/A
SO _x	40.0	N/A	0.35	2.86	2.63	N/A
NO _x	40.0	N/A	5.26	43.51	<40	0.0226
VOC	40.0	N/A	0.43	3.55	3.27	N/A
CO	100.0	N/A	1.13	9.37	8.62	N/A
HAPs	10.0/25.0	N/A	N/A	0.04	0.04	N/A

Note: N/A = Not Applicable

* Existing potential emissions taken from permit #072006-006 (Project 2006-05-040)

** Conditioned potential of NO_x based on limit in permit conditions. Other pollutants proportionally reduced.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Screening tools were used to evaluate the ambient air impact of the hourly emissions from this operation. The ambient impact was evaluated at a distance of 650 feet to the nearest property boundary. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/m³ of PM₁₀ at or beyond the nearest property boundary in any single 24-hour period. For sources agreeing to use Best Management Practices (BMPs), as defined in Attachment AA, haul roads and stockpiles are not modeled with screening tools. Instead, they are addressed as a background level of 20 µg/m³ of PM₁₀. To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 µg/m³ of PM₁₀ at or beyond the nearest property boundary.

The rock-crushing plant can operate for twenty-four (24) hours without exceeding NAAQS. Therefore, no record keeping is necessary to ensure NAAQS compliance. No ambient air quality impact analysis was conducted for NO_x because it is being limited to below its *de minimis* level.

Table 3: Ambient Air Quality Impact Analysis of PM₁₀, 24-Hour Averaging Time

Operation	Ambient Impact Factor (µg/m ³ /ton)	Modeled Impact (µg/m ³)	*Background (µg/m ³)	NAAQS (µg/m ³)	Daily Production Limit (tons)
1. Solitary	0.00972	102.64	20.00	150.00	10,560

* Background PM₁₀ level of 20.00 µg/m³ from haul roads and stockpiles.

APPLICABLE REQUIREMENTS

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- An operating permit amendment is required for this installation within 30 days of equipment startup.
- *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 10-3.090
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not apply to the proposed equipment.

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.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Lafarge North America, Inc. as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, *Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition*.
- Noyes Data Corp. book, Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southeast Regional Office Site Survey.
- Best Management Practices.

Mr. Josh Martin
Resource Management Coordinator
Lafarge North America, Inc.
15100 E. Courtney Atherton Road
Sugar Creek, MO 64058

RE: New Source Review Permit - Project Number: 2006-11-037

Dear Mr. Martin:

Enclosed with this letter is your New Source Review permit. Please review your permit carefully and note the special conditions, if any, and the requirements in your permit.

Operation in accordance with the conditions and requirements in your permit, the New Source Review application submitted for project 2006-11-037, and your amended operating permit is necessary for continued compliance. Please review your amended operating permit, as it will contain all applicable requirements for your rock crushing plant, including any special conditions from your New Source Review permit.

The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from the main portion of your permit. The entire permit must be retained in your files. 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 me at (573) 751-4817, or you may write to the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall Hale, P.E.
New Source Review Unit Chief

KH:cwyl

Enclosures

c: Southeast Regional Office
PAMS File: 2006-11-037
Permit Number: