



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: 012009-005 Project Number: 2008-11-030

Parent Company: Graniteville Quarry, LLC

Parent Company Address: HCR 63 Box 3372, Ironton, MO 63650

Installation Name: Graniteville Quarry, LLC

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

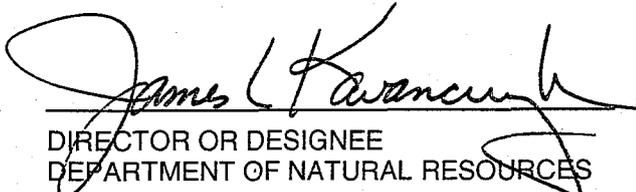
Location Information: Iron County, S10/11, T34N, R3E

Application for Authority to Construct was made for:
This project is a cleanup of the existing installations permits. 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.

JAN 13 2009

EFFECTIVE DATE


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 departments' 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 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 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.

Page No.	3
Permit No.	
Project No.	2008-11-030

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."

Graniteville Quarry, LLC
Iron County, S10/11, T34N, R3E

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permits (Permit Numbers: 082001-015, 012002-001 and 072006-007) from the Air Pollution Control Program.
2. **Emission Limitation - National Ambient Air Quality Standards (NAAQS)**
 - A. Graniteville Quarry, LLC shall maintain a daily record of material processed and demonstrate that the daily impact on ambient air quality from the source does not exceed the daily NAAQS of 150 $\mu\text{g}/\text{m}^3$ for particulate matter less than ten microns in diameter (PM_{10}) at or beyond the property boundary.
 - B. Attachment A or an equivalent form shall be used for this purpose. Graniteville Quarry, LLC shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - C. Graniteville Quarry, LLC shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.B indicate that the source exceeds the daily NAAQS of 150 $\mu\text{g}/\text{m}^3$.
3. **Emission Limitation**
 - A. Graniteville Quarry, LLC shall emit less than 15 tons of particulate matter less than ten (10) microns in diameter (PM_{10}) in any consecutive 12 month period from the equipment listed in Attachment B.
 - B. Graniteville Quarry, LLC shall maintain an accurate record of PM_{10} emitted into the atmosphere from the entire installation. Attachment C or an equivalent form shall be used for this purpose. Graniteville Quarry, LLC shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - C. Graniteville Quarry, LLC shall report to the Air Pollution Control Program's

Page No.	4
Permit No.	
Project No.	2008-11-030

SPECIAL CONDITIONS:

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

Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 3.B indicate that the source exceeds the limitation of Special Condition Number 3.A.

4. **Best Management Practices Requirement**
Graniteville Quarry, LLC shall control emissions from all haul roads and vehicular activity areas by performing *Best Management Practices*, which include paving, applying chemical dust suppressants and documented watering as defined in Attachment AA.
5. **Wet Spray Control System Requirement**
 - A. Graniteville Quarry, LLC shall install and operate wet spray devices on the following equipment.
 - 1.) Primary Crusher (EU-04)
 - 2.) Scalping Screen (EU-07)
 - 3.) Secondary Crusher (EU-08)
 - 4.) Tertiary Crusher (EU-16)
 - 5.) Finish Screen (EP-18)
 - B. Operation of the wet spray devices may be suspended during periods of freezing, when use of the devices may damage the equipment. During these periods, Graniteville Quarry, LLC shall adjust the production rate to minimize visible emissions from these units.
6. **Concurrent Operation Prohibition**
Graniteville Quarry, LLC is prohibited from operating while other plants are located at the site.
7. **Process Configuration Requirement**
Graniteville Quarry, LLC shall configure the rock-crushing plant as described in the application for authority to construct. Modification of the process is prohibited without further Air Pollution Control Program Review.
8. **Minimum Distance Requirement**
Graniteville Quarry, LLC shall locate the primary crusher (EU-04) a minimum of 550 feet from any property boundary.

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

Project Number: 2008-11-030
Installation ID Number: 093-0026
Permit Number:

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

Complete: November 14, 2008

Parent Company:
Graniteville Quarry, LLC
HCR 63 Box 3372
Ironton, MO 63650

Iron County, S10/11, T34N, R3E

REVIEW SUMMARY

- Graniteville Quarry, LLC has request that the Air Pollution Control Program re-issue a Section 5 permit for their entire installation.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- Subpart OOO of the New Source Performance Standards (NSPS) applies to rock-crushing plant.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Wet spray devices is being used to control the PM₁₀ 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 limited below de minimis levels.
- This installation is located in Iron County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality screening was performed to determine the ambient impact of PM₁₀.

- Emissions testing is not required for the equipment.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Graniteville Quarry, LLC is an existing rock-crushing plant. The plant’s primary crusher is rate at 450 tons per hour. Upon issuance of this permit, they will be a synthetic de minimis source of PM₁₀. They hold a basic operating permit. The plant was originally permitted in 2001 by Missouri Red Quarries, was bought by Lafarge North America, and is now owned by Graniteville Quarry, LLC.

The following permits have been issued to this installation from the Air Pollution Control Program. The diesel engines in permit 062007-007 have not been installed. If Graniteville Quarry, LLC does not commence construction of the diesel engines by June 13, 2009, authority to construct these units will expire.

Table 1: Construction Permits Issued

Permit Number	Description
082001-015	New rock-crushing plant
102002-001	Screening plant and wash screws
072006-007	Add rock-crushing equipment and BMPs
062007-007	Diesel Engines

PROJECT DESCRIPTION

Graniteville Quarry, LLC has requested that the Air Pollution Control Program re-issue a de minimis construction permit for the rock-crushing plant. When the quarry’s previous owner vacated the site they took various pieces of the plant with them. Graniteville Quarry, LLC has attempted to replace the equipment with like-kind replacements, but in order to ensure compliance has requested a new permit for the entire installation.

This permit supersedes the previous first three permits issued to the installation and establishes a new installation wide de minimis limit. This limit applies to the equipment listed in Attachment B. Permit 062007-007 was not superseded because it contains special conditions that only apply to the diesel engines addressed by the permit.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/D	5.66	98.38	< 15
SO _x	40.0	N/D	0.30	N/A	N/A
NO _x	40.0	N/D	4.53	N/A	N/A
VOC	40.0	N/D	N/D	N/A	N/A
CO	100.0	N/D	0.98	N/A	N/A
HAPs	10.0/25.0	N/D	N/D	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 PM₁₀ are limited below de minimis levels.

APPLICABLE REQUIREMENTS

Graniteville Quarry, LLC 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
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *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 10-3.090

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations, 10 CSR 10-6.070 – New Source Performance Standards (NSPS) for Non-Metallic Mineral Processing Plants, 40 CFR Part 60, Subpart OOO*

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality screening was performed to determine the ambient impact of PM₁₀. The maximum concentration of PM₁₀ at the installation's property boundary was determined using the Air Pollution Control Program's quarry spreadsheet. The screening showed that the plant would exceed the National Ambient Air Quality Standard (NAAQS) for PM₁₀ so the installation was limited to that standard.

Concentrations from the haul roads and storage piles were addressed as a background of 20 µg/m³ in accordance with the Air Pollution Control Program's Best Management Practices policy.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	Ambient Impact Factor (µg/m ³ /ton)	Modeled Impact (µg/m ³)	Background (µg/m ³)	NAAQS (µg/m ³)	Daily Production Limit (tons)
PM ₁₀	0.01526	130.00	20.00	150.00	8,517

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.

Michael Mittermeyer
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November, 12, 2008, received November 14, 2008, designating Graniteville Quarry, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated date.

Attachment B – Emission Units

Graniteville Quarry, LLC
Iron County, S10/11, T34N, R3E
Project Number: 2008-11-030
Installation ID Number: 093-0026

Permit Number:

Emission Unit	Description
EU-01	Haul Road - Pit
EU-02	Truck Loading
EP-02	Truck Unloading
EU-03	Grizzly Feeder
EU-04	Primary Crusher
EU-05	Primary Crusher Underconveyor
EU-06	Scalping Screen Feed Conveyor
EU-07	Scalping Screen
EU-08	Secondary Crusher
EU-09	Secondary Crusher Underconveyor
EU-10	Ballast Wet Screen Feed Conveyor
EU-11	Wash Screen (saturated process, no emissions)
EU-12	Ballast Radial Stacker (saturated process, no emissions)
EU-13	Scalping Screen Underconveyor
EU-14	Finish Screen Feed Conveyor
EU-15	Crusher Feed Stacker
EU-16	Tertiary Crusher
EU-17	Crusher Underconveyor
EU-18	Finish Screen
EU-19	Wet Screen Feed Conveyor
EU-20	Wash Screen (saturated process, no emissions)
EU-21	Radial Stacker (saturated process, no emissions)
EU-22	Wash Screen (saturated process, no emissions)
EU-23	Radial Stacker (saturated process, no emissions)
EU-24	Finish Screen Underconveyor
EU-25	Screenings Stacker
EU-26	Storage Pile Load In
EU-26	Storage Pile Load Out
EU-26	Storage Pile Wind Erosion
EU-26	Storage Pile Vehicular Activity
EU-27	Haul Road - Plant
EU-28	Generator (never installed)
EU-29	Surge Pile Feed Conveyor
EU-30	Surge Pile Load In

Emission Unit	Description
EU-30	Surge Pile Load Out
EU-30	Surge Pile Wind Erosion
EU-31	Underground Feeder (saturated process, no emissions)
EU-32	Secondary Crusher Feed Conveyor
EU-33	Conveyor
EU-34	Wet Screen Feed Conveyor
EU-35	Conveyor
EU-36	Wash Screen (saturated process, no emissions)
EU-37	Sand Screw (saturated process, no emissions)
EU-38	Conveyor (saturated process, no emissions)
EU-39	Conveyor (saturated process, no emissions)
EU-40	Conveyor (saturated process, no emissions)

Mr. Ben Studdard
Plant Manager
Graniteville Quarry, LLC
North of Missouri Route 21 on Iron County #96
Graniteville, MO 63650

RE: New Source Review Permit - Project Number: 2008-11-030

Dear Mr. Studdard:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 Michael Mittermeyer, at the departments' 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

Kendall B. Hale
New Source Review Unit Chief

KBH:mml

Enclosures

c: Southeast Regional Office
PAMS File: 2008-11-030

Permit Number: