

**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:

042011-005

Project Number: 2011-01-003

Installation ID: 037-0053

Parent Company: Beyer Crushed Rock Co.

Parent Company Address: 408 High Grove Road, Grandview, MO 64030

Installation Name: Beyer Crushed Rock Co.

Installation Address: 4600 East Highway Y, Cleveland, MO 64734

Location Information: Cass County, S26, T45N, R33W

Application for Authority to Construct was made for:

The addition of a crusher, screen, and conveyors rated at 200 tons per hour, a diesel engine rated at 425 horsepower and a diesel engine rated at 237 horsepower. 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.

APR 28 2011

EFFECTIVE DATE

Handwritten signature of James C. Kavanaugh in black ink.

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 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 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.

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**SPECIAL CONDITIONS:**

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

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*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."*

1. **Superseding Condition**  
The conditions of this permit supersede Special Condition 1 found in Construction Permit 102005-009A from the Air Pollution Control Program.
2. **Best Management Practices (BMPs) Requirement**  
Beyer Crushed Rock Co. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
3. **Ambient Air Impact Limitation**
  - A. Beyer Crushed Rock Co. shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM<sub>10</sub>) of 150.0 µg/m<sup>3</sup> 24-hour average in ambient air.
  - B. Beyer Crushed Rock Co. shall demonstrate compliance with Special Condition 3.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form. Beyer Crushed Rock Co. shall account for the impacts from other sources of PM<sub>10</sub> as instructed in Attachment B.
4. **NO<sub>x</sub> Annual Emission Limit**
  - A. Beyer Crushed Rock Co. shall emit less than 40.0 tons of nitrogen oxides (NO<sub>x</sub>) in any consecutive 12-month period from the generators of this permit (EP-12C and EP-12D).
  - B. Beyer Crushed Rock Co. shall demonstrate compliance with Special Condition 4.A using Attachment C or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
5. **PM<sub>10</sub> Annual Emission Limit**
  - A. Beyer Crushed Rock Co. shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12-month period from emission points listed in Table 1.

**SPECIAL CONDITIONS:**

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

Table 1: Emission Points of Project

Emission Point (EP)	Emission Description
EP-2	Haul Road #1
EP-10	Haul Road #2
EP-11	Storage Pile
EP-3B	Eagle impact crusher
EP-4O	Under crusher conveyor
EP-4P	Under screen conveyor
EP-4Q	Cross conveyor
EP-4R	Cross conveyor
EP-4S	Return conveyor
EP-4T	Conveyor
EP-4U	Conveyor
EP-5C	Eagle screen
EP-10	Haul Road
EP-11	Storage Pile
EP-12C	425 HP Diesel Generator

- B. Beyer Crushed Rock Co. shall demonstrate compliance with Special Condition 5.A using Attachment D or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
6. Moisture Content Testing Requirement
- A. Beyer Crushed Rock Co. shall verify that the moisture content of the processed rock is greater than or equal to 1.5% 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).

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**SPECIAL CONDITIONS:**

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

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- 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 Beyer Crushed Rock Co. 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 6.A, another test may be performed within 15 days of the noncompliant test. If the results of that test also exceed the limit, Beyer Crushed Rock Co. shall either:
  - 1.) Apply for a new permit to account for the revised information, or
  - 2.) Submit a plan for the installation of wet spray devices to the Air Pollution Control Program Compliance Assistance section 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, Beyer Crushed Rock Co. may obtain test results that demonstrate compliance with the moisture content in Special Condition 6.A from the supplier of the aggregate.
  
- 7. Diesel Generator  
The equipment of this installation is powered by one diesel generator, rated at 425 HP (EP-12C). It shall not run unless they are powering the rock-crushing equipment. A generator rated at 237 HP (EP-12D) is used to power a heater that keeps oil warm during cold nights for some equipment located at this site. Because this generator is used overnight, its emissions are counted as a background source.
  
- 8. Fuel Sulfur Weight Percent Requirement
  - A. The installation shall only burn diesel fuel #2 with a sulfur content less than 0.05% by weight in all generators at this site.
  
  - B. The use of waste oil #4, waste oil #5, and waste oil #6 in generators are prohibited.
  
  - C. For each delivery of diesel fuel #2 the installation shall obtain the sulfur content from either the fuel vendors or by conducting their own fuel analysis. The fuel consumption records and statement shall be kept on-site for five (5) years and shall be made immediately available to the Missouri Department of Natural Resources' personnel upon request.
  
- 9. Minimum Distance to Property Boundary Requirement  
The Eagle Impact Crusher (EP-3B) shall be located at least 900 feet from the nearest property boundary.

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**SPECIAL CONDITIONS:**

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

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10. Primary Equipment Requirement  
Beyer Crushed Rock Co. shall process all rock through the primary crusher (EP-3B). Bypassing this primary crusher is prohibited.
  
11. Record Keeping Requirement  
Beyer Crushed Rock Co. 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.
  
12. Reporting Requirement  
Beyer Crushed Rock Co. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

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

Project Number: 2011-01-003  
Installation ID Number: 037-0053  
Permit Number:

Beyer Crushed Rock Co.  
4600 East Highway Y  
Cleveland, MO 64734

Complete: January 5, 2011

Parent Company:  
Beyer Crushed Rock Co.  
408 High Grove Road  
Grandview, MO 64030

Cass County, S26, T45N, R33W

PROJECT DESCRIPTION

Beyer Crushed Rock Co. (herein referred to as Beyer) has requested for authority to construct and operate an additional rock-crushing plant that is rated at 200 tons per hour, which is referred to as the Eagle Plant, in Cleveland, Missouri. This plant will be powered by a 425 horsepower diesel generator. Beyer also operates an existing rock-crushing plant at this site that is rated at 300 tons per hour. This existing plant is referred to as the Primary Plant. The Primary Plant and the Eagle Plant will operate independently of each other and therefore the emissions of each plant will be tracked separately. Per Permit # 102005-009A, the Primary Plant shall emit less than 50.0 tons of PM<sub>10</sub> per year. The annual PM<sub>10</sub> emissions from the Primary Plant shall be recorded on Attachment B of Permit # 102005-009A.

The Eagle Plant processes rock, composed of non-metallic minerals (mostly limestone), through a crusher, screen, and seven conveyors. This operation first involves drilling to loosen limestone, which is then transported to the primary crusher via a conveyor. The crushed limestone is then put through a screen, and if needed, the larger pieces are put through the crusher multiple times to reduce the limestone to the desired particle size. The crushed limestone is then transferred via conveyors to storage piles to await shipping.

The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas. The company will also test the moisture content of the processed rock to ensure that it is greater than 1.5% by weight.

This installation is a minor source for all pollutants but operates under a basic operating permit (Project # 2010-01-028). This installation is not on the List of Named Installations (10 CSR 10-6.020(3)(B), Table 2). The installation is located in Cass County, a maintenance area for ozone and an attainment area for all other criteria

pollutants. 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the following equipment: Eagle impact crusher (EP-3B), Eagle screen (EP-5C), and all conveyors (EP-4O, EP-4P, EP-4Q, EP-4R, EP-4S, EP-4T, and EP-4U).

The 425 horsepower (EP-12C) and the 237 horsepower (EP-12D) generators are subject to 40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" and 40 CFR Part 63, Subpart ZZZZ, "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

## TABLES

The following construction permits have been issued to Beyer Crushed Rock Co. from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
0689-008	Installation of a portable rock crushing installation
0694-011	Increase production levels to 600,000 tons per year
0796-010	Replace secondary crusher and add three (3) new conveyors
0399-026	Addition of 972 HP engine
102005-009	Addition of Best Management Practices
102005-009A	Collocation allowed

The table below summarizes the emissions of this project. The existing actual emissions were taken from the previous years EIQ. The potential emissions of the application represent the emissions of all new equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions are based on a voluntary limit of 15.0 tons per year for the project to avoid refined modeling.

Table 3: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	<sup>1</sup> Existing Potential Emissions	Existing Actual Emissions (2009 EIQ)	<sup>2</sup> Potential Emissions of the Application	<sup>3</sup> Conditioned Potential Emissions of the Application
PM <sub>10</sub>	15.0	< 50.0	3.62	28.87	< 15.00
PM <sub>2.5</sub>	10.0	N/D	0.94	16.07	8.35
SO <sub>x</sub>	40.0	8.36	0.50	6.11	3.17
NO <sub>x</sub>	40.0	86.67	13.89	92.93	< 40.0
CO	100.0	20.88	3.30	20.02	10.40
VOC	40.0	4.61	0.79	7.59	3.94
Total HAPs	25.0	0.06	N/D	0.08	0.04

N/D = Not Determined

<sup>1</sup> Existing Potential Emissions for the existing equipment are taken from Permit # 102005-009A

<sup>2</sup> Unconditioned potential emissions of new equipment without control devices, which includes haul road and storage pile emissions

<sup>3</sup> Conditioned potential emissions of new equipment are limited by 15.0 ton of PM<sub>10</sub> per year and 40.0 tons of NO<sub>x</sub> per year. Other pollutants are proportionally reduced.



Table 4: Ambient Air Quality Impact Analysis

Pollutant	<sup>1</sup> NAAQS (µg/m <sup>3</sup> )	Averaging Time	<sup>2</sup> Maximum Modeled Impact of Primary Plant (µg/m <sup>3</sup> )	<sup>2</sup> Maximum Modeled Impact of Eagle's Plant (µg/m <sup>3</sup> )	Total Limited Impact (µg/m <sup>3</sup> )	<sup>3</sup> Daily Production Limit of Primary Plant (tons/day)	<sup>3</sup> Daily Production Limit of Eagle's Plant (tons/day)	<sup>4</sup> Back-ground (µg/m <sup>3</sup> )
<sup>5</sup> PM <sub>10</sub> (same)	150.0	24-hour	331.82	37.52	130.0	3,733	4,800	34.37
<sup>6</sup> PM <sub>10</sub> (separate)	150.0	24-hour	331.82	37.52	70.0	N/A	N/A	80.0

N/A = Not Applicable

<sup>1</sup> National Ambient Air Quality Standards (NAAQS).

<sup>2</sup> Modeled impact of each plant at maximum capacity with controls at this site.

<sup>3</sup> Maximum daily production for each plant when it complies with the NAAQS for PM<sub>10</sub>.

<sup>4</sup> Background emissions include 14.37 µg/m<sup>3</sup> from EP-12D, which runs independently of the plant, and 20.0 µg/m<sup>3</sup> for the use of BMPs for haul roads and stock piles.

<sup>5</sup> Solitary operation or operation with other plants that are owned by Beyer Crushed Rock Co.

<sup>6</sup> Operation with other plants that are not owned by Beyer Crushed Rock Co.

## EMISSIONS CALCULATIONS

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. The controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5% weight. Emissions from the diesel generators were calculated using emission factors from AP-42 Section 3.3 "Gasoline and Diesel Industrial Engines," October 1996.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency is applied to the emission calculations for the use of BMPs. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006. The moisture content of the aggregate is 1.5% weight. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

Emissions from the diesel generators were calculated using emission factors from AP-42 Section 3.3 "Gasoline and Diesel Industrial Engines," October 1996 and Section 3.4 "Large Stationary Diesel and All Stationary Dual-fuel Engines," October 1996.

## AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 4. The Air Pollution Control Program requires an AAQIA of PM<sub>10</sub> for all asphalt, concrete and rock-crushing plants regardless of the level of PM<sub>10</sub> emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software SCREEN3. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the National Ambient Air Quality Standard (NAAQS) or Risk Assessment Level (RAL) for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant's production is limited to ensure compliance with the standard. The ambient impact of EP-12D was calculated using SCREEN3 and shall be tracked as a background PM<sub>10</sub> source.

This plant uses BMPs to control emissions from haul roads and vehicular activity areas, so emissions from these sources were not included in the AAQIA. Instead they were addressed as a background concentration of 20.0 µg/m<sup>3</sup> of PM<sub>10</sub> in accordance with the Air Pollution Control Program's BMPs interim policy.

## OPERATING SCENARIOS

The plant is permitted to operate with other plants located at the site as long as the NAAQS is not exceeded. The following scenarios explain how Beyer shall demonstrate compliance with the NAAQS.

- When plants that are owned by Beyer, which are referred to as same owner plants, are located at the site, Beyer must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS.
- When plants that are not owned by Beyer, which are referred to as separate owner plants, are located at the site, Beyer must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by Beyer that are operating at the site. This total is limited below the NAAQS. Beyer will limit the total impact of all plants they own and operate at the site to 70.0 µg/m<sup>3</sup> when any plants they do not own are located at the site per Permit # 102005-009A. Beyer is not permitted to operate with any plant that is not owned by Beyer that has a separate owner background greater than 45.63 µg/m<sup>3</sup>.

EP-12D is used to power an overnight heater located at this site. Because this generator is used overnight, its emissions are counted as a background source (14.37 µg/m<sup>3</sup>).

## 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<sub>10</sub> are conditioned below de minimis levels.

## APPLICABLE REQUIREMENTS

Beyer Crushed Rock Co. 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 on April 1 for paper submittals or May 1 for MOEIS submittals for the previous year's emissions.
- An update to your basic operating permit is required for this installation to include the equipment of this permit within 30 days equipment becomes operational.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

### SPECIFIC REQUIREMENTS

- 40 CFR 60, New Source Performance Standards (NSPS), Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants."
- 40 CFR 60, New Source Performance Standards (NSPS), Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines."
- 40 CFR Part 63, Maximum Achievable Control Technology (MACT) Regulations, Subpart ZZZZ, "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) apply to the proposed equipment.
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

## 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.

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Daronn Williams  
Environmental Engineer

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Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 1, 2010, received January 3, 2010, designating Beyer Crushed Rock Co. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, dated January 11, 2011.













## 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 emissions<sup>1</sup> 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 (5) 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 (5) years, and the operator shall make these records available to Department of Natural Resources personnel upon request.

<sup>1</sup>For 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.)

**Attachment BB: Installation Emission Calculations**  
**Eagles Plant Only**  
 Beyer Crushed Rock Company (037-0053)  
 2011-01-003

Emission Point (EP)	Description and SCC	<sup>1</sup> MHDR	MHDR Units	<sup>2</sup> PM <sub>10</sub> EF	EF Units	Control Eff. %	Emissions (lb/hr)	<sup>3</sup> Modeling Rate (lb/hr)
2	Haul Road #1 30502011	5.5758	VMT	2.441154	VMT	90.00	0.006806	1.361128236
10	Haul Road #2 30502011	6.4000	VMT	2.590857	VMT	90.00	0.008291	1.658148412
11A	Load In, Storage Pile #1 30502007	200.0000	Tons	0.004125	Tons	0.00	0.004125	0.825089849
11B	Wind Erosion, Storage Pile #1 30502507	6.0000	Acres	0.089166	Acres	0.00	0.002675	0.534997636
11C	Vehicular Activity, Storage Pile #1 30502007	200.0000	Tons	0.005478	Tons	90.00	0.000548	0.109564238
11D	Load Out, Storage Pile #1 30502007	200.0000	Tons	0.004125	Tons	0.00	0.004125	0.825089849
3B	Crusher-Secondary, (Diameter 1-4") 30502002	200.0000	Tons	0.002400	Tons	77.50	0.000540	0.108
4O	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
12C	425 hp Industrial Diesel Engine 20200102	0.0225	Mgal	42.470000	Mgal	0.00	0.004787	0.957446071
5C	Screens, (3/16" or Greater) 30502002	200.0000	Tons	0.008700	Tons	91.49	0.000740	0.148
4P	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
4Q	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
4R	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
4S	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
4T	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
4U	Conveyor 30502006	200.0000	Tons	0.001100	Tons	95.82	0.000046	0.0092
12D	237 hp Industrial Diesel Engine 20200102	0.0126	Mgal	42.470000	Mgal	0.00	0.001643	0.53391699

<sup>1</sup> Maximum Hourly Design Rate (MHDR)

<sup>2</sup> Emission Factor (EF)

<sup>3</sup> The Modeling Rate is the emission rate scaled to the daily hours of operation at MHDR allowed by the permit.

Mr. Kevin Fahey  
President  
Beyer Crushed Rock Co.  
408 High Grove Road  
Grandview, MO 64030

RE: New Source Review Permit - Project Number: 2011-01-003

Dear Mr. Fahey:

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 Daronn Williams, at the Department's 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:dwl

Enclosures

c: Kansas City Regional Office  
PAMS File: 2011-01-003

Permit Number: