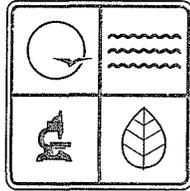


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

## 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 2 0 0 6 - 0 1 8** Project Number: **2006-02-024**  
**055-0031**  
Owner: **Breckenridge Material Company**  
Owner's Address: **P.O. Box 19918, St. Louis, MO 63144**  
Installation Name: **Breckenridge Materials - Sullivan**  
Installation Address: **Route FF, North Service Road, Sullivan, MO 63080**  
Location Information: **Crawford County, S24, T40N, R3W**

Application for Authority to Construct was made for:

The modification of an existing concrete plant. Concrete is produced through a Truck Mix process. The concrete plant has a maximum hourly design rate (MHDR) of 120 tons per hour (tph). 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 28 2006

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.** 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.

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### **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.*

1. National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) for Breckenridge Materials - Sullivan's concrete plant (055-0031) shall ensure, while operating at this site, that the ambient impact of PM<sub>10</sub> at or beyond the nearest property boundary does not exceed 150 µg/m<sup>3</sup> in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. Attachment A, *Daily Ambient PM<sub>10</sub> Impact Tracking Record*, or other equivalent form(s), will be used for this purpose.
2. Pavement of Haul Road(s) and Vehicular Activity Area(s)
  - A. The operator(s) shall pave the specified haul roads and vehicular activity area(s) around the storage pile(s) with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the Program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve "Control of Fugitive Emissions" while the plant is operating. The following haul road(s) and vehicle activity area(s) are to be paved: Haul Road #3 (HR#3) and Haul Road #4 (HR#4).
  - B. Maintenance and/or repair of the surfaces 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(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) and vehicular activity area(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
3. Usage of Chemical Dust Suppressants on Haul Road(s) and Vehicular Activity Area(s)
  - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to the specified unpaved portions of the haul roads and to all vehicular activity areas around the storage piles. The suppressant will be applied in accordance with the manufacturer's suggested application rate and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating. Chemical dust suppressants are to be used on the following haul road(s) and vehicle activity area(s): Haul Road #1 (HR#1), Haul Road #2 (HR#2), and the vehicular activity areas around all stockpiles.
  - B. The operator(s) shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas.
4. Moisture Content Testing of Storage Piles Requirement
  - A. The moisture content of the stockpiled rock will reduce particulate emissions. Breckenridge Materials - Sullivan claimed the moisture content of the stored rock to be greater than or equal to 1.5 wt.%, which shall be verified by testing.
  - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director.
  - C. The operator may obtain a copy of the test results of the inherent moisture content from the supplier(s) of the aggregate. Otherwise, the operator shall obtain test samples from each shipment of untested aggregate. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. Within 30 days of completion of the required tests, the report shall be filed on-site or at Breckenridge Materials' main office.

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**SPECIAL CONDITIONS:**

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

- D. If the moisture content result of the first test is less than 1.5 wt.%, a second test must be performed within 30 days. If the result of the second test is less than 1.5 wt.%, Breckenridge Materials - Sullivan shall apply for a new construction permit to account for the revised information and install wet spray devices on the affected units.
5. Baghouse(s) Control System Requirements
  - A. Breckenridge Materials - Sullivan shall install and operate baghouse(s) to restrict the emission of particulate matter. The baghouse(s) must be used whenever these units are in operation. The baghouse(s) shall be installed on the following units: Truck Loading (EU 8), Cement Unloading to Elevated Silo (EU 3), Cement Supplement Unloading to Elevated Silo (EU 4), and Weigh Hopper Loading for Cement and Cement Supplement (EU 7).
  - B. Breckenridge Materials - Sullivan shall install instruments to monitor the operating pressure drop across the baghouse. All instruments and control equipment shall be calibrated, maintained and operated according to the manufacturer's preventive maintenance recommendations. The operator(s) shall check and record the pressure drop across the baghouse filter once per operating day during silo loading. The baghouse operating pressure drop shall be maintained according to manufacturer specification.
  - C. The operator(s) shall conduct and document a quarterly inspection and maintenance of the baghouse for structural component failures, for leaks and wear, and for the cleaning sequence of the baghouse. Replacement bags shall be kept on hand at all times to replace defective bags (The bags shall be made of fibers appropriate for the operating conditions expected to occur). All inspections, corrective actions, and instrument calibrations shall be recorded.
6. Prohibition Against Concurrent Operations Without Further Review
  - A. The concrete plant (055-0031) is prohibited from operating whenever any other Air Pollution Control Program non-exempt plant(s) are located at this site.
7. Restriction on Minimum Distance to Nearest Property Boundary

The primary emission point of the concrete plant, which is the Truck Loading (EU 8), shall be located at least 300 feet from the nearest property boundary whenever it is operating at this site.
8. Record Keeping Requirement

The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
9. Reporting Requirement

The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.
10. Superseding Condition

The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (0990-010, 0990-010A, 0990-010B) from the Air Pollution Control Program.

# TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

## PROJECT DESCRIPTION

Concrete is composed of water, cement, sand (fine aggregate), and non-metallic coarse aggregate rock. These materials are processed either in mixer trucks or in a central mix drum. Processed concrete is delivered as sellable product. The emission points are listed in the attached spreadsheet summary. This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is located in Crawford County, an attainment area for all criteria air pollutants.

This permit was modified to increase production. Breckenridge Material Company purchased this plant from K. R. Wilson in 2005. The application for this permit modification established the following conditions.

1. Chemical dust suppressants are used on all stockpile vehicular activity areas.
2. The distance to the nearest property boundary is 300 feet.
3. The MHDR of the plant is 120 tons per hour (rather than the 82.5 tons per hour reported on the 1990 permit).
4. The aggregate has high moisture content.
5. Haul roads are maintained with paving or chemical dust suppressants. (Breckenridge did not prefer to use Best Management Practices.)
6. No electrical generators are used at this site. All electrical power sources come from line power.

**Table 1. Other Permits Issued for Installation 055-0031**

Permit Number	Completed	Description
0990-010	1990	Section 5/6: new concrete plant
0990-010A	2001	Corrections and Amendments: allow colocation
0990-010B	2002	Corrections and Amendments: allow colocation

## EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is PM<sub>10</sub>. 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).

**Table 2: Emissions Summary (tons per year)**

Air Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	**New Installation Conditioned Potential	Emission Factor (lb/ton)
PM <sub>10</sub>	15.0	0.498	*9.2	6.3	N/A
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

Note: N/A = Not Applicable

\* Below de minimis due to haul road and stockpile area control measures.

\*\* Conditioned potential based on daily production limit from ambient impact analysis. Other pollutants proportionately 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 300 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/m<sup>3</sup> of PM<sub>10</sub> at or beyond the nearest property boundary in any single 24-hour period. The screening tools were used to develop an ambient impact factor for the concrete plant. This ambient impact factor is incorporated into the daily record keeping table, Attachment A.

**Table 3: Ambient Air Quality Impact Analysis of PM<sub>10</sub>, 24-Hour Averaging Time**

Operation	Ambient Impact Factor (µg/m <sup>3</sup> /ton)	Modeled Impact (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )	Daily Production Limit (tons)
1. Solitary	0.0722	150.00	150.00	2077

**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
- No Operating Permit is required for this concrete plant.
- *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
- 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.

\_\_\_\_\_  
Jeannie Kozak  
Environmental Engineer

\_\_\_\_\_  
Date

**PERMIT DOCUMENTS**

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct, designating Breckenridge Material Company 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 Corporation, 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.



Mr. Robert Kintz  
Vice President  
Breckenridge Material Company  
P.O. Box 19918  
St. Louis, MO 63144

RE: New Source Review Permit - Project Number: 2006-02-024

Dear Mr. Kintz:

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 and with the New Source Review application submitted for project 2006-02-024 is necessary for continued compliance.

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, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall Hale, P.E.  
New Review Unit Chief

KH:JKI

Enclosures

c: Southeast Regional Office  
PAMS File: 2006-02-024  
Permit Number: