

STATE OF MISSOURI

PERMIT BOOK



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.

072011-006

Permit Number:

Project Number: 2010-12-032

Installation ID: 095-0089

Parent Company: Superior Bowen Asphalt Co., LLC

Parent Company Address: 11030 Hickman Mills Drive, Kansas City, MO 64137

Installation Name: Superior Bowen Asphalt Co., LLC

Installation Address: 2250 NW Quarry Park Road, Lee's Summit, MO 64134

Location Information: Jackson County (S35, T48N, R32W)

Application for Authority to Construct was made for:

The addition of a recycled asphalt product (RAP) crushing operation to an existing asphalt plant. 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.

JUL 13 2011

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 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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SITE SPECIFIC 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."

1. **Superseding Condition**
The conditions of this permit supersede Special Conditions 2 and 7, found in previously issued Construction Permit (032009-005) from the Air Pollution Control Program.
2. **Best Management Practices Requirement**
Superior Bowen Asphalt Co., LLC shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.
3. **Ambient Air Impact Limitation**
 - A. Superior Bowen Asphalt Co., LLC shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM₁₀) of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Superior Bowen Asphalt Co., LLC 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. Superior Bowen Asphalt Co., LLC shall account for the impacts from other sources of PM₁₀ as instructed in Attachment A.
4. **Minimum Distance to Property Boundary Requirement**
The primary emission point of the RAP crushing plant, which is the primary crusher, shall be located at least 320 feet from the nearest property boundary.
5. **Nonroad Diesel Engine Requirement**
Superior Bowen Asphalt Co., LLC shall keep sufficient records (i.e. the date that the engine moves in and out of a site) to show that the diesel engine used for the RAP crushing operation is a nonroad engine as defined in 40 CFR, Chapter 1, Subchapter C, Part 89.2.
6. **Concurrent Operations Restrictions**
Superior Bowen Asphalt Co., LLC shall not operate with any plants that it does not share some common ownership with.
7. **Record Keeping Requirement**
Superior Bowen Asphalt Co., LLC 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.

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SITE SPECIFIC SPECIAL CONDITIONS:

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

8. Reporting Requirement
Superior Bowen Asphalt Co., LLC 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: 2010-12-032
Installation ID Number: 095-0089
Permit Number:

Superior Bowen Asphalt Co., LLC
2250 NW Quarry Park Road
Lee's Summit, MO 64134

Complete: March 10, 2011

Parent Company:
Superior Bowen Asphalt Co., LLC
11030 Hickman Mills Drive
Kansas City, MO 64137

Jackson County (S35, T48N, R32W)

PROJECT DESCRIPTION

Superior Bowen Asphalt Co., LLC has proposed to add a recycled asphalt product (RAP) crushing operation to its existing stationary asphalt plant. The RAP crushing operation is rated at 50 tons per hour and consists of a crusher, a screen, six conveyors and a 250 horsepower nonroad diesel engine that powers the equipment. The diesel engine is considered a nonroad engine because the facility is only expected to move the RAP crushing operation to the site a few days a year to crush RAP. If the facility changes its method of operation to where the diesel engine operates at this site during the full annual operating period of the asphalt plant, then the diesel engine would no longer be considered a nonroad engine and the company shall submit a modification request to include the diesel engine of the RAP crushing plant in the ambient impact analysis and the emissions analysis for this site.

The applicant will continue using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas. This installation is located in Jackson County, a maintenance area for ozone and an attainment area for all other criteria pollutants. This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are counted toward major source applicability.

Currently, there is a RAP crushing plant (095-0296) operated by Jacomo Trucking located adjacent to the asphalt plant. When the two plants were first permitted, they were considered separate installations located on different sites. However, Jacomo Trucking recently submitted an application (Project 2010-09-052) to add a new recycled asphalt shingles (RAS) crushing plant and an amendment request (Project 2011-01-053) to change the existing RAP crushing plant to a portable screening plant by removing all of the crushers. During the review of these projects, it was determined that both plants have some common ownership and the Daily PM₁₀ Ambient Impact Analysis performed for the site should include impact from all plants at the site. Therefore, this project allows Superior

Bowen Asphalt Co., LLC's stationary asphalt plant to operate concurrently with any plants that it shares common ownership with. Superior Bowen Asphalt Co., LLC's stationary asphalt plant is not permitted to operate with plants without any common ownership.

TABLES

The following permits have been issued to Superior Bowen Asphalt Co., LLC from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
1292-008	New asphalt plant
032009-005	Replacing the old dryer

The table below summarizes the emissions of this project. The existing actual emissions were taken from the 2010 EIQ. The potential emissions of the application represent the emissions of all equipment (except the nonroad diesel engine) and activities assuming continuous operation (8,760 hours per year).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	¹ Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	² Potential Emissions of the Application	Conditioned Potential Emissions
PM _{2.5}	10.0	N/D	0.21	1.58	N/A
PM ₁₀	15.0	15.0	5.57	4.18	N/A
SO _x	40.0	2.11	0.25	N/A	N/A
NO _x	40.0	21.71	2.31	N/A	N/A
VOC	40.0	12.51	2.71	N/A	N/A
CO	100.0	50.95	9.37	N/A	N/A
Formaldehyde	³ 2.0	1.21	N/D	N/A	N/A
Total HAPs	25.0	3.91	N/D	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

¹Existing potential emissions taken from Permit 032009-005

²Includes site specific haul road and storage pile emissions

³Screening Model Action Level (SMAL)

Table 3: Ambient Air Quality Impact Analysis

Pollutant	¹ NAAQS (µg/m ³)	Averaging Time	² Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	³ Daily Limit (tons/day)
⁴ PM ₁₀ (same)	150.0	24-hour	166.1	130.0	20.0	N/D

N/D – Not Determined

¹National Ambient Air Quality Standards (NAAQS)

²Modeled impact at maximum capacity with controls. Includes both the asphalt plant and the RAP crushing operation.

³Daily Limit is not determined because Superior Bowen Asphalt Co., LLC can balance production between the plants to ensure compliance with NAAQS.

⁴Solitary operation or operation with other plants that share common ownership with Superior Bowen Asphalt Co., LLC

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. Emissions from RAP crushing, screening and conveying 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 oil content in the RAP is expected to minimize emissions.

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. Due to the oil in the RAP, the moisture content used in the equation is 1.5% by 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."

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 3. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ 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. In cases where the plant is providing material for a highway project, the ambient impact can be evaluated in accordance with a memorandum issued by the Air Pollution Control Program titled "Permitting Asphalt/Concrete Plants for Temporary Highway Projects," dated April 10, 2000. This memorandum states that air quality can be analyzed at the nearest residence or location where the public could reasonably expect to be found instead of all ambient air. This practice generally allows for a less restrictive daily production level while protecting the public.

The ambient impact of the 250 hp diesel engine is not included in the AAQIA because it is considered a nonroad engine. 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 µg/m³ of PM₁₀ 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. When plants that have common ownership with Superior Bowen Asphalt Co., LLC (referred to as same owner plants) are located at the site, Superior Bowen Asphalt Co., LLC must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS. Superior Bowen Asphalt Co., LLC is not permitted to operate with plants that it does not share some common ownership with.

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 all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Superior Bowen Asphalt Co., 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 by April 1st, if submitting a hardcopy and by May 1st, if submitting online at www.dnr.mo.gov/moeis/main/login, for the previous years' emissions. Payment is due June 1st.
- A modification to your Basic Operating Permit 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 10-6.165

SPECIFIC REQUIREMENTS

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) 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.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

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 emissions¹ 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

¹For 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.)

Mr. Keith Davenport
Manager
Superior Bowen Asphalt Co., LLC
11030 Hickman Mills Drive
Kansas City, MO 64137

RE: New Source Review Permit - Project Number: 2010-12-032

Dear Mr. Davenport:

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 Chia-Wei Young, at the Department's 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

Kendall B. Hale
New Source Review Unit Chief

KBH:cyk

Enclosures

c: Kansas City Regional Office
PAMS File: 2010-12-032

Permit Number: