

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.

Permit Number: 062013-008

Project Number: 2013-03-074

Installation ID: PORT-0699

Parent Company: B & P Excavating LLC

Parent Company Address: 23670 Sacajawea Rd, Sedalia, MO 65301

Installation Name: B & P Excavating LLC

Installation Address: 23670 Sacajawea Road, Sedalia, MO 65301

Location Information: Pettis County, S20 T45N R21W

Application for Authority to Construct was made for: Portable Concrete Crusher. This review was conducted in accordance with Section (6), 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.

JUN 14 2013

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 Department's Air Pollution Control Program of the anticipated date of startup 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 startup 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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GENERAL 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. **Equipment Identification Requirement**
B & P Excavating LLC shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component.
2. **Relocation of Portable Rock/Concrete Crushing Plant**
 - A. B & P Excavating LLC shall not be operated at any location longer than 24 consecutive months.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
 - 1) If the portable rock crushing plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
 - 2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.
3. **Record Keeping Requirement**
B & P Excavating LLC shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
4. **Reporting Requirement**
B & P Excavating LLC shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

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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."

PORT ID Number: PORT-0699

Site ID Number: 159-0074

Site Name: B & P Excavating Yard

Site Address: 23670 Sacajawea Road, Sedalia, MO 65301

Site County: Pettis, S20 T45N R21W

1. **Best Management Practices Requirement**
B & P Excavating LLC 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.
2. **Wet Suppression Control System Requirement**
 - A. B & P Excavating LLC shall install and operate wet spray devices on inlet screen (EP-05) and crusher (EP-06).
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, B & P Excavating LLC shall adjust the production rate to control emissions from these units. B & P Excavating LLC shall record a brief description of such events.
3. **Minimum Distance to Property Boundary Requirement**
The primary emission point shall be located at least 200 feet from the nearest property boundary.
4. **Concurrent Operation Restriction**
B & P Excavating LLC is prohibited from operating whenever other plants are located at the site.
5. **Record Keeping Requirement**
B & P Excavating 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.
6. **Reporting Requirement**
B & P Excavating LLC shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2013-03-074

Installation ID Number: PORT-0699

Permit Number:

B & P Excavating LLC
23670 Sacajawea Road
Sedalia, MO 65301

Complete: Month Day, Year

Parent Company:
B & P Excavating LLC
23670 Sacajawea Rd
Sedalia, MO 65301

Pettis County, S20 T45N R21W

PROJECT DESCRIPTION

This project is for a new portable (PORT-0699) impact crusher plant. B & P Excavating will recycle concrete and initially locate this new portable plant at their company yard at 23670 Sacajawea Road, Sedalia, Missouri. Rubble concrete will be hauled by dump truck to the yard via a 1,535 foot receiving haul road (EP-01). A 318 CAT excavator will load the rubble concrete from the storage pile and into the crusher. There will be no vehicular activity between the storage piles and the portable crusher. The portable plant will be a track mounted 1999 Hartl Crushtek Mini Track MT 503 concrete crusher S/N 13-10-03-148. The portable plant consists of a feed hopper that will hold six cubic yards and a vibrating chute with a pre-screener (EP-05) that has a capacity of 120 tons per hour. The crusher (EP-06) is a PC 203 impact crusher with a MHDR of 150 tons per hour. The hydraulic discharge conveyor (EP-07) has a MHDR of 200 tons per hour with a belt speed of 5 ft/sec. The crusher also has a magnetic separator to remove the metal reinforcing material from the crushed concrete. Water spray devices are located on the screen before the impact crusher and after the crusher at the discharge conveyor. Crushed product is loaded from the stockpiles into dump trucks using a 318 CAT excavator. The length of the shipping haul road is 1,685 feet (EP-11). Both haul roads are unpaved and B & P Excavating LLC is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

The bottleneck of this portable plant is at the vibrating chute, therefore limiting the MHDR of the plant to 120 tons per hour.

The portable plant is powered by a 253 hp diesel engine CAT 3126 DITA. This engine serves a dual purpose for this track mounted crusher by both propelling itself and performing another function (supplying power to the portable plant) and therefore meets the definition of a nonroad engine as stated in 40 CFR 89.2 *Nonroad Engine* (1)(i).

This installation is located in Pettis County, an attainment area for all criteria pollutants.

This installation is not 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 not counted toward major source applicability.

No permits have been issued to B & P Excavating LLC from the Air Pollution Control Program.

TABLES

Table 1 below lists the Unit ID and equipment description for PORT-0699.

Table 1: Emission Units

Unit ID	Equipment/Description
EP-01	Haul Road 1 delivering concrete rubble
EP-02	Load into storage pile #1
EP-03	Wind erosion from storage pile #1
EP-04	Load into hopper
EP-05	Vibrating chute with pre-screener inside hopper
EP-06	Impact crusher
EP-07	Conveyor belt
EP-08	Load into storage pile #2
EP-09	Wind erosion storage pile #2
EP-10	Load out of storage pile #2 (finished product)
EP-11	Haul road 2 shipping of finished product

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. There are no existing actual emissions since this is a new portable plant. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Potential Emissions of Process Equipment	Existing Actual Emissions	^a Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	1.88	N/A	92.20	N/A
PM ₁₀	15.0	0.71	N/A	38.38	N/A
PM _{2.5}	10.0	0.09	N/A	9.78	N/A
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	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
Total HAPs	25.0	N/A	N/A	N/A	N/A

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

^bIncludes site specific haul road and storage pile emissions

Table 3 summarizes the ambient air quality impact analysis. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously. The 24-hour limited impacts and daily limit are based on compliance with the NAAQS for PM₁₀.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	NAAQS/RAL ($\mu\text{g}/\text{m}^3$)	Averaging Time	^a Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$)	Limited Impact ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Daily Limit (tons/day)
^b PM ₁₀	150.0	24-hour	35.62	N/A	20.0	N/A

^aModeled impact at maximum capacity with controls

^bSolitary operation

EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States 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 and 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 equipment is controlled by water spray devices.

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 for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} were 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. The moisture content of the aggregate and concrete is 0.7% 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 AERSCREEN. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the NAAQS or 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 is 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 should be analyzed at the nearest residence or location where the public could reasonably be expected to be found instead of all ambient air. This practice generally allows for a less restrictive daily production level while protecting the public.

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 $\mu\text{g}/\text{m}^3$ of PM_{10} in accordance with the Air Pollution Control Program's BMPs interim policy.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{10} are above the de minimis level, but below the 100 tons per year threshold that is allowed for portable plants according to 10 CSR 10-6.060 (4)(A). No refined modeling is required because PM_{10} emissions are below the 50 ton per year according to 10 CSR 10-6.060 (6)(B)(3.).

APPLICABLE REQUIREMENTS

B & P Excavating 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.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.
- A Basic Operating Permit application is not required for this installation because it is a portable 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 10-6.165

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.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathy Kolb
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 21, 2013, received March 25, 2013, designating B & P Excavating LLC as the owner and operator of the installation.
- 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.

APPENDIX A

Abbreviations and Acronyms

%	percent	MMBtu	Million British thermal units
°F	degrees Fahrenheit	MMCF	million cubic feet
acfm	actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	NAAQS ...	National Ambient Air Quality Standards
BMPs	Best Management Practices	NESHAPs ..	National Emissions Standards for Hazardous Air Pollutants
Btu	British thermal unit	NO_x	nitrogen oxides
CAM	Compliance Assurance Monitoring	NSPS	New Source Performance Standards
CAS	Chemical Abstracts Service	NSR	New Source Review
CEMS	Continuous Emission Monitor System	PM	particulate matter
CFR	Code of Federal Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CO	carbon monoxide	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
CO₂	carbon dioxide	ppm	parts per million
CO_{2e}	carbon dioxide equivalent	PSD	Prevention of Significant Deterioration
COMS	Continuous Opacity Monitoring System	PTE	potential to emit
CSR	Code of State Regulations	RACT	Reasonable Available Control Technology
dscf	dry standard cubic feet	RAL	Risk Assessment Level
EQ	Emission Inventory Questionnaire	SCC	Source Classification Code
EP	Emission Point	scfm	standard cubic feet per minute
EPA	Environmental Protection Agency	SIC	Standard Industrial Classification
EU	Emission Unit	SIP	State Implementation Plan
fps	feet per second	SMAL	Screening Model Action Levels
ft	feet	SO_x	sulfur oxides
GACT	Generally Available Control Technology	SO₂	sulfur dioxide
GHG	Greenhouse Gas	tph	tons per hour
gpm	gallons per minute	tpy	tons per year
gr	grains	VMT	vehicle miles traveled
GWP	Global Warming Potential	VOC	Volatile Organic Compound
HAP	Hazardous Air Pollutant		
hr	hour		
hp	horsepower		
lb	pound		
lbs/hr	pounds per hour		
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		
m/s	meters per second		
Mgal	1,000 gallons		
MW	megawatt		
MHDR	maximum hourly design rate		

Mr. Michael Brown
Owner
B & P Excavating LLC
23670 Sacajawea Road
Sedalia, MO 65301

RE: New Source Review Permit - Project Number: 2013-03-074

Dear Mr. Brown:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions 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 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, please do not hesitate to contact Kathy Kolb, 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

Susan Heckenkamp
New Source Review Unit Chief

SH:kk1

Enclosures

c: Kansas City Regional Office
PAMS File: 2013-03-074

Permit Number: