

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:

112012-007

Project Number: 2012-09-017

Installation ID: PORT-0479

Parent Company:

Fred Weber, Inc.

Parent Company Address: 2320 Creve Coeur Mill Road, Maryland Heights, MO 63043

Installation Name:

Fred Weber, Inc.

Installation Address:

13588 Brickey's Road, Bloomsdale, MO 63627

Location Information:

Ste. Genevieve County, S13/23, T39N, R7E

Application for Authority to Construct was made for:

The addition of an impact crusher, a screen and six (6) conveyors to an existing portable rock crushing plant. 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.

NOV 19 2012

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 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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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**
Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the new equipment.
2. **Relocation of Portable Rock Crushing Plant**
 - A. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0479, contain a nonroad engine requirement limiting the portable plant at the site specific location to 12 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**
Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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**
Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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.

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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-0479

Site ID Number: 186-0021

Site Name: APAC Brickey's Stone

Site Address: 13588 Brickey's Road, Bloomsdale, MO 63627

Site County: Ste. Genevieve County (S13/23, T39N, R7E)

1. Superseding Condition

The conditions of this permit supersede all special conditions found in the previously issued construction permit (No. 6799G) from the Air Pollution Control Program.

2. Best Management Practices Requirement

Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall ensure, while operating at this site, that the ambient impact of particulate matter less than ten microns in aerodynamic diameter (PM_{10}) at or beyond the nearest property boundary does not exceed $150.00 \mu\text{g}/\text{m}^3$ in any 24-hour period, in accordance with the National Ambient Air Quality Standards (NAAQS).

B. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall demonstrate compliance with Special Condition 3.A using Attachment A and Attachment B or other equivalent forms that have been approved by the Air Pollution Control Program, including an electronic forms Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall account for the impacts from other sources of PM_{10} as instructed in the attachments.

C. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) is exempt from the requirements of Special Condition 3.B when no other plants are operating at this site.

4. Annual Emission Limit

A. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall emit less than 10.0 tons of particulate matter less than two-and-a-half microns in diameter ($PM_{2.5}$) in any 12-month period from the entire installation.

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SITE SPECIFIC SPECIAL CONDITIONS:

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

- B. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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. Wet Suppression Control System Requirement
- A. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall install and operate wet spray devices on all crushers and screens and on every other conveyor.
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall adjust the production rate to control emissions from these units. Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall record a brief description of such events.
6. Minimum Distance to Property Boundary Requirement
- The primary emission point, which is the primary screen (EP08) shall be located at least 1,700 feet from the nearest property boundary.
7. Primary Equipment Requirement
- Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) shall process all rock through the primary screen (EP08). Bypassing the primary screen is prohibited.
8. Nonroad Engine Requirement
- PORT-0479 cannot operate at this site longer than 12 consecutive months in order for the 755 horsepower diesel engine to meet the definition of a nonroad engine as stated in 40 CFR 89.2(1)(i).
9. Record Keeping Requirement
- Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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.
10. Reporting Requirement
- Fred Weber, Inc.'s portable rock crushing plant (PORT-0479) 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 (6) REVIEW

Project Number: 2012-09-017

Installation ID Number: PORT-0479

Permit Number:

Fred Weber, Inc.
13588 Brickey's Road
Bloomsdale, MO 63627

Complete: September 10, 2012

Parent Company:
Fred Weber, Inc.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

Ste. Genevieve County, S13/23, T39N, R7E

PROJECT DESCRIPTION

Fred Weber, Inc. recently relocated its portable rock rushing plant, PORT-0479, to a site owned by APAC in Ste. Genevieve County. An impact crusher, a screen and six (6) conveyors will be added to process the aggregates. The addition of the equipment will debottleneck the plant from 400 tons per hour (tph) to 500 tph. The aggregates will be fed at 500 tph to the feeder. Approximately 170 tph is expected to fall through while the rest will be processed by the crusher, which still has an MHDR of 400 tph. At the first screen, the two streams combine and the rest of the equipment at the plant will handle 500 tph. The additional equipment is only for this site and will not be carried to other sites. Therefore, only special conditions in the previously issued 21-day relocation permit for this site (Permit No. 6799G, Project No. 2012-04-043) are superseded. If the facility relocates to other previously permitted sites, it can still submit a 7-day relocation request and operate under the previously issued 21-day relocation permit.

The plant will use a diesel engine rated at 755 horsepower, but because this plant is not expected to stay a site for more than 12 consecutive months, it is considered a nonroad engine and its emissions are not counted in this permit. The 12-month period started when the plant first moved to this site and is not based on the issuance date of this permit.

The portable plant is expected to operate concurrently with APAC Brickey's Stone rock crushing operation (186-0049) and Fischer Quarries portable rock crushing plant (PORT-0504). The APAC plant is permitted for 100.00 micrograms per cubic meters ($\mu\text{g}/\text{m}^3$) of PM_{10} ambient impact and Fischer Quarries portable rock crushing plant is permitted for 10.46 $\mu\text{g}/\text{m}^3$. Fred Weber, Inc.'s portable rock crushing plant, PORT-0479, is permitted for the remaining 19.54 $\mu\text{g}/\text{m}^3$.

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.

TABLES

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excludes emissions from haul roads and wind erosion, are site specific and should not vary from site to site. There are no existing actual emissions because the facility submitted a no production letter for 2011. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions are based on the limit of 10.0 tons per year of PM_{2.5} and take into account spray bars used to control emissions.

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential emissions of process equipment	Existing Actual Emissions (2011 EIQ)	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	23.49	N/A	189.86	99.9
PM ₁₀	15.0	9.33	N/A	41.22	41.2
PM _{2.5}	10.0	1.52	N/A	19.00	<10.0
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	10.0/25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aExclude emissions from haul roads and wind erosion.

^bIncludes site specific haul road and storage pile emissions

Table 2: Ambient Air Quality Impact Analysis

Pollutant	^a NAAQS/RAL (µg/m ³)	Averaging Time	^b Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^c Daily Limit (tons/day)
^d PM ₁₀ (same)	150.0	24-hour	23.32	N/A	20.0	N/A
^e PM ₁₀ (separate)	150.0	24-hour	23.32	19.54	130.46	10,056

^aNational Ambient Air Quality Standards (NAAQS) and Risk Assessment Level (RAL)

^bModeled impact at maximum capacity with controls

^cIndirect limit based on compliance with NAAQS.

^dSolitary operation or operation with other plants that are owned by Fred Weber, Inc.

^eOperation with other plants that are not owned by Fred Weber, Inc.

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 equipment is control 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. For the use of BMPs, a 90 percent (%) control efficiency is applied to the emission calculations for PM₁₀ and PM and a 40% control efficiency is applied for PM_{2.5}. 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 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 2. 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 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 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 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 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. The following scenarios explain how Fred Weber, Inc. shall demonstrate compliance with the NAAQS.

- When no other plants are located at the site, the facility is not required to track the daily ambient impact of the plant to ensure compliance with the NAAQS.
- When plants that are owned by Fred Weber, Inc., which are referred to as same owner plants, are located at the site, Fred Weber, Inc. must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS using Attachment A.
- When plants that are not owned by Fred Weber, Inc. which are referred to as separate owner plants, are located at the site, Fred Weber, Inc. must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by Fred Weber, Inc. that are operating at the site. This total is limited below the NAAQS. Fred Weber Inc. will limit the total impact of all plants they own and operate at the site to $19.54 \mu\text{g}/\text{m}^3$ when any plants they do not own are located at the site. Fred Weber, Inc. is not permitted to operate with any plants that is not owned by Fred Weber, Inc. that has a combined separate owner background greater than $110.46 \mu\text{g}/\text{m}^3$. During this scenario, Fred Weber, Inc. shall use Attachment B to demonstrate compliance with the NAAQS.

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 and PM₁₀ are above their respective de minimis level. All other pollutants are conditioned below their respective de minimis levels.

APPLICABLE REQUIREMENTS

Fred Weber, Inc. 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.
- *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.

Chia-Wei Young
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 September 7, 2012, received September 10, 2012, designating Fred Weber, Inc. 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.

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.)

Ms. Lina Klein
Environmental Manager
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: New Source Review Permit - Permit Number:
Project Number: 2012-09-017; Installation Number: PORT-0479

Dear Ms. Klein:

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 and your new source review permit application and with your 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 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:cyl

Enclosures

c: Southeast Regional Office
PAMS File: 2012-09-017

Permit Number: