

MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **07 2016 - 005**

Project Number: 2016-05-023
Installation ID: PORT-0739

Parent Company: Fred Weber, Inc.

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

Installation Name: Fred Weber, Inc. – Portable Ballast Plant #2

Installation Address: 1325 Highway NN, Iron Mountain, MO 63650

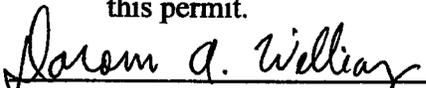
Location Information: St. Francois County, S31 T35N R4E

Application for Authority to Construct was made for:

The installation of a new 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.



Prepared by
Daronn A. Williams
New Source Review Unit



Director or Designee
Department of Natural Resources

JUL 14 2016

Effective Date

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of 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's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:

Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:

<http://dnr.mo.gov/regions/>

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-0739

Site ID Number: 187-0006

Site Name: Iron Mountain Trap Rock

Site Address: 1325 Highway NN, Iron Mountain, MO 63650

Site County: St. Francois County, S31 T35N R4E

1. Best Management Practices Requirement
Fred Weber, Inc. 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. Annual Emission Limit
 - A. Fred Weber, Inc. shall emit less than 15.0 tons of PM₁₀ in any 12-month period from PORT-0739, as defined in Table 1, and its associated storage piles and haul roads.
 - B. Fred Weber, Inc. shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
3. Moisture Content Testing Requirement
 - A. Fred Weber, Inc. shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. An initial test shall be conducted no later than 45 days after the start of operation.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Fred Weber, Inc. main office within 30 days of completion of the required test.
 - F. If the moisture content of test is less than the moisture content in Special Condition 3.A, another test shall be performed within 15 days of the noncompliant test. If the results of

SITE SPECIFIC SPECIAL CONDITIONS:

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

that test is less than the moisture content in Special Condition 3.A, Fred Weber, Inc. shall either:

- 1) Apply for a new permit to account for the revised information, or
- 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

G. In lieu of testing, Fred Weber, Inc. may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the aggregate.

4. Primary Equipment Requirement

Fred Weber, Inc. shall process all rock through the primary crusher (EP-2). Bypassing the primary crusher is prohibited.

5. Nonroad Engine Requirement

Fred Weber, Inc.'s engines shall not remain at one location within this site longer than 12 consecutive months in order for the engines to meet the definition of a nonroad engine as stated in 40 CFR 89.2. These engines shall be moved with its associated equipment at least once every 12 consecutive months at this site. As a result and to avoid record keeping for the movement of the engine, Iron Mountain Trap Rock shall not operate at this site no longer than 12 months from the effective date of this permit.

6. Record Keeping Requirement

Fred Weber, Inc. 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.

7. Reporting Requirement

Fred Weber, Inc. 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: 2016-05-023

Installation ID Number: PORT-0739

Permit Number:

Fred Weber, Inc.
1325 Highway NN
Iron Mountain, MO 63650

Complete: May 11, 2016

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

St. Francois County, S31 T35N R4E

PROJECT DESCRIPTION

Fred Weber, Inc. (Fred Weber) submitted an Application For Authority To Construct to install a new portable rock-crushing plant (PORT-0739). This plant is rated at 500 tons per hour and will initially operate at Fred Weber's Iron Mountain Trap Rock site. This plant will consist of the emission sources listed in Table 1.

Table 1: Plant Emissions Point Summary

Emission Point	Description	Emission Point	Description
1	Loading from pit to plant (loader)	11	Conveyor C7
2	Primary Crusher	12	Conveyor C8
3	Conveyor C1	13	Conveyor C9
4	Conveyor C2	14	Conveyor C10
5	8x20 3D screen	15	Haul road #1 - unpaved - pit to plant
6	Conveyor C3	16	Haul road #2 - unpaved - sales
7	Secondary Crusher	17a	Storage pile vehicular activity
8	Conveyor C4	17b	Storage pile wind erosion
9	Conveyor C5	17c	Storage pile loadout
10	Conveyor C6		

At this initial site, PORT-0739 will operate with a stationary rock-crushing plant and a stationary roof granules drying plant. Some of the special conditions of the permits for these stationary plants (Construction Permits 032015-009 and 092015-015) have been revised and/or superseded in order to convert NAAQS limits to daily production throughput limits.

Haul road and storage pile emissions for the portable plant were calculated using the same parameters used in the review of Construction Permit 072009-019 and 092015-015. These parameters include a 2.5% silt content for haul roads, 111 days of rain greater than 0.01 inches, a 1.5% moisture content for aggregate, and a 6.9 mile per hour wind speed for storage pile calculation. These parameters are either from testing or actual data from the vicinity.

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. This installation is located in St. Francois 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 this portable plant owned by Fred Weber from the Air Pollution Control Program.

The plant will be powered by a diesel engine, however it meets the definition of nonroad engine as defined in 40 CFR 89.2 (1)(i). Therefore, the emissions of the engine were not included in the project emissions.

TABLES

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. 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 a voluntary PM₁₀ emission limit to avoid modeling requirements.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	10.53	N/A	82.75	52.8
PM ₁₀	15.0	4.00	N/A	23.51	< 15.0
PM _{2.5}	10.0	0.61	N/A	9.48	6.05
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

^aExcludes emissions from haul roads and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

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 equipment were calculated using emission factors from AP-42 Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004. The controlled emission factors were used because the inherent moisture content of the crushed rock is equal to or greater than 1.5 % by weight.

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 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.”

The engine emissions were not evaluated for this review as the diesel engine at this site is classified as a nonroad engine. 40 CFR 63 Subpart ZZZZ, “National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” and 40 CFR 60 Subpart IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines” do not apply. However, if the plant were to remain in one location for longer than 12 consecutive months, it would not be in compliance with this permit because engine emissions were not evaluated. It may also not be in compliance with MACT ZZZZ or NSPS IIII. The nonroad engine is subject to further applicable requirements in 40 CFR 89 and 40 CFR 1039 which are outside the purview of this program.

OPERATING SCENARIOS

PORT-0739 cannot operate with other plants that have ambient impact limits based on the Air Pollution Control Program’s nomographs. When locating to a site that have or will have other plants, please refer to that plant’s permit special conditions.

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 are above de minimis levels, but below major source levels. There are no modeling requirements for PM.

APPLICABLE REQUIREMENTS

Fred Weber 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.
- No Operating Permit is required for this installation.
- *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 of the rock-crushing plant.
- None of the NESHAPS or MACT regulations 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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct, signed by Roger L. Gagliano and received May 10, 2016, designating Fred Weber, Inc. as the owner and operator of the installation.

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 plant is operating.

1. Pavement
 - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions 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	MWmegawatt
°Fdegrees Fahrenheit	MHDRmaximum hourly design rate
acfmactual cubic feet per minute	MMBtuMillion British thermal units
BACTBest Available Control Technology	MMCFmillion cubic feet
BMPsBest Management Practices	MSDSMaterial Safety Data Sheet
BtuBritish thermal unit	NAAQSNational Ambient Air Quality Standards
CAMCompliance Assurance Monitoring	NESHAPs ...National Emissions Standards for Hazardous Air Pollutants
CASChemical Abstracts Service	NO_xnitrogen oxides
CEMSContinuous Emission Monitor System	NSPSNew Source Performance Standards
CFRCode of Federal Regulations	NSRNew Source Review
COcarbon monoxide	PMparticulate matter
CO₂carbon dioxide	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
CO_{2e}carbon dioxide equivalent	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
COMSContinuous Opacity Monitoring System	ppmparts per million
CSRCode of State Regulations	PSDPrevention of Significant Deterioration
dscfdry standard cubic feet	PTEpotential to emit
EIQEmission Inventory Questionnaire	RACTReasonable Available Control Technology
EPEmission Point	RALRisk Assessment Level
EPAEnvironmental Protection Agency	SCCSource Classification Code
EUEmission Unit	scfmstandard cubic feet per minute
fpsfeet per second	SDSSafety Data Sheet
ftfeet	SICStandard Industrial Classification
GACTGenerally Available Control Technology	SIPState Implementation Plan
GHGGreenhouse Gas	SMALScreening Model Action Levels
gpmgallons per minute	SO_xsulfur oxides
grgrains	SO₂sulfur dioxide
GWPGlobal Warming Potential	tphtons per hour
HAPHazardous Air Pollutant	tpytons per year
hrhour	VMTvehicle miles traveled
hphorsepower	VOCVolatile Organic Compound
lbpound	
lbs/hrpounds per hour	
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	
Mgal1,000 gallons	

Ms. Lina Klein
Environmental Director
Fred Weber, Inc.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: New Source Review Permit - Project Number: 2016-05-023

Dear Ms. Klein:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. 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 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information

Ms. Lina Klein
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is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:dwj

Enclosures

c: Southeast Regional Office
PAMS File: 2016-05-023

Permit Number: