

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:

072012-015

Project Number: 2012-07-074

Installation ID: PORT-0684

Parent Company: Fred Weber, Inc.

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

Installation Name: Fred Weber, Inc. - Trommel Screen

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 installation of a new rock screening 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.

JUL 31 2012

EFFECTIVE DATE

A handwritten signature in cursive script, appearing to read "Kyray Moore".

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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Project No.	2012-07-074

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. - Trommel Screen 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 portable rock crushing plant.
2. **Relocation of Portable Rock Crushing Plant**
 - A. Fred Weber, Inc. - Trommel Screen shall not be operated at any location longer than 24 consecutive months unless the site-specific special conditions require a shorter time frame.
 - 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 screening plant.
 - 1) If the portable rock screening 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 screening 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. - Trommel Screen 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. - Trommel Screen 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-0684

Site ID Number: 186-0053

Site Name: APAC - Brickey's

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

Site County: Ste. Genevieve S13/23 T39N R7E

1. Best Management Practices Requirement
Fred Weber, Inc. - Trommel Screen 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 Appendix B.
2. Ambient Air Impact Limitation
 - A. Fred Weber, Inc. - Trommel Screen shall not cause an exceedance of the NAAQS for PM₁₀ of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Fred Weber, Inc. - Trommel Screen shall demonstrate compliance with Special Condition 2.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. - Trommel Screen shall account for the impacts from other sources of PM₁₀ as instructed in the attachments.
 - C. Fred Weber, Inc. - Trommel Screen is exempt from the requirements of Special Condition 2.B when no other plants are operating at this site.
3. Wet Suppression Control System Requirement
 - A. Fred Weber, Inc. - Trommel Screen shall install and operate wet spray devices on all screens and conveyors.
 - 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. - Trommel Screen shall adjust the production rate to control emissions from these units. Fred Weber, Inc. - Trommel Screen shall record a brief description of such events.
4. Minimum Distance to Property Boundary Requirement
The primary emission point, which is the primary screen (EP-2) shall be located at least 1700 feet from the nearest property boundary.

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SITE SPECIFIC SPECIAL CONDITIONS:

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

5. Primary Equipment Requirement
Fred Weber, Inc. - Trommel Screen shall process all rock through the primary screen (EP-2). Bypassing the primary screen is prohibited.
6. Operation Requirement
Fred Weber, Inc. - Trommel Screen shall not operate at this site for more than 12 consecutive months.
7. Record Keeping Requirement
Fred Weber, Inc. - Trommel Screen 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.
8. Reporting Requirement
Fred Weber, Inc. - Trommel Screen 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: 2012-07-074

Installation ID Number: PORT-0684

Permit Number:

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

Complete: July 20, 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. has requested to install a new portable rock screening plant, PORT-0684, which is rated at 400 tons per hour, at the APAC - Brickey's site in Ste. Genevieve County, S13/23 T39N R7E. A 350 horsepower generator is used to power the equipment of this plant. The emissions from the diesel generator were not considered in this application as PORT-0684 will not be at this site for more than 12 consecutive months therefore the engine is considered non-road as defined in 40 CFR 89.2 (1)(i). PORT-0684 controls particulate matter using wet spray devices that are located on all screens and conveyors.

Currently at this site APAC operates a stationary rock crushing plant (186-0046) and Fischer Quarries operates a portable rock crushing plant (PORT-0504). Of the 130 $\mu\text{g}/\text{m}^3$ of daily PM_{10} ambient impact available at this site the APAC plant uses 100.0 $\mu\text{g}/\text{m}^3$ of daily PM_{10} ambient impact at the site and Fischer Quarries PORT-0504 uses 10.46 $\mu\text{g}/\text{m}^3$ of daily PM_{10} ambient impact. This leaves 19.54 $\mu\text{g}/\text{m}^3$ of daily PM_{10} ambient impact available at this site. Fred Weber, Inc. also operates a portable rock crushing, PORT-0681, at this site which is limited to 19.54 $\mu\text{g}/\text{m}^3$ of daily impact. PORT-0684 will also be limited to 19.54 $\mu\text{g}/\text{m}^3$ of daily impact. Fred Weber, Inc.'s PORT-0681 and PORT-0684 will be required to share the daily impact of 19.54 $\mu\text{g}/\text{m}^3$ between the two plants.

The applicant is using one of the methods described in Appendix B, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

This installation is located in Ste. Genevieve 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 Fred Weber, Inc. - Trommel Screen from the Air Pollution Control Program.

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 site specific 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).

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions of the Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application
PM	25.0	4.89	N/A	74.36
PM ₁₀	15.0	1.49	N/A	29.87
PM _{2.5}	10.0	0.19	N/A	7.63
SO _x	40.0	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A

N/A = Not Applicable

^a Excludes haul road and storage pile emissions

^b Includes site specific haul road and storage pile emissions

Table 2: Ambient Air Quality Impact Analysis

Pollutant	NAAQS/RAL (µg/m ³)	Averaging Time	^a Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^b Daily Limit (tons/day)
^c PM ₁₀ (same)	150.0	24-hour	3.72	130.0	20.0	N/A
^d PM ₁₀ (separate)	150.0	24-hour	N/A	19.54	110.46	N/A

^a Modeled impact at maximum capacity with controls

^b Indirect limit based on compliance with NAAQS.

^c Solitary operation or operation with other plants that are owned by Fred Weber, Inc. only.

^d Operation 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 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 the engine powering the equipment were not included because Fred Weber, Inc. - Trommel Screen will not be at this site for more than 12 consecutive months therefore meets the definition of a non-road piece of equipment as defined in 40 CFR 89.2 (1)(i).

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 PM₁₀ and 40% control efficiency for PM_{2.5} 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. 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 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.

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. - Trommel Screen shall demonstrate compliance with the NAAQS.

- When no other plants are located at this site Fred Weber, Inc. is not required to calculate the daily impact of Fred Weber, Inc. - Trommel Screen
- 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. - Trommel Screen is not permitted to operate with any plants that are 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. - Trommel Screen 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 de minimis levels. An ambient air quality analysis was performed for PM₁₀ using the Air Pollution Control Program's generic nomographs and was found to be in compliance with 24-hour PM₁₀ NAAQS standard. No modeling is required for PM.

APPLICABLE REQUIREMENTS

Fred Weber, Inc. - Trommel Screen 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

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.

Gerad Fox
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 19, 2012, received July 20, 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.

Appendix A: Abbreviations and Acronym

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

Appendix B: 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 rational 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
Fred Weber, Inc. - Trommel Screen
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: New Source Review Permit - Project Number: 2012-07-074

Dear Ms. Klein:

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 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.

If you have any questions regarding this permit, please do not hesitate to contact Gerad Fox, 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:gfl

Enclosures

c: Southeast Regional Office
PAMS File: 2012-07-074

Permit Number: