

**STATE OF 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: **11 2014 - 001**

Project Number: 2014-07-036  
Installation ID: PORT-0712

Parent Company: Cave City Sand, LLC

Parent Company Address: 20 Cave Industrial Drive, Festus, MO 63028

Installation Name: Cave City Sand, LLC Wash Plant # 1

Installation Address: 8799 Trautman Quarry Road, Pevely, MO 63070

Location Information: Jefferson County, Land Grant 932, T41N, R5E

Application for Authority to Construct was made for:  
New portable sand crushing and washing 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 3 - 2014**

EFFECTIVE DATE

Handwritten signature of Kyrna Z Moore in black ink.

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.

Page No.	3
Permit No.	
Project No.	2014-07-036

**GENERAL SPECIAL CONDITIONS:**

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

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*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**  
Cave City Sand, LLC Wash Plant # 1 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 Sand Crushing and Washing Plant**
  - A. Cave City Sand, LLC Wash Plant # 1 shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0712, 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**  
Cave City Sand, LLC Wash Plant # 1 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**  
Cave City Sand, LLC Wash Plant # 1 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.

Page No.	4
Permit No.	
Project No.	2014-07-036

**SITE SPECIFIC SPECIAL CONDITIONS:**

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

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*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-0712

Site ID Number: 099-0177

Site Name: Trautman Quarry

Site Address: 8799 Trautman Quarry Road, Pevely, MO 63070

Site County: Jefferson County, Land Grant 932, T41N, R5E

1. **Best Management Practices Requirement**  
Cave City Sand, LLC Wash Plant # 1 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. **Ambient Air Impact Limitation**
  - A. Cave City Sand, LLC Wash Plant # 1 shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter ( $PM_{10}$ ) of  $150.0 \mu\text{g}/\text{m}^3$  24-hour average in ambient air.
  - B. Cave City Sand, LLC Wash Plant # 1 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. Cave City Sand, LLC Wash Plant # 1 shall account for the impacts from other sources of  $PM_{10}$  as instructed in Attachment A.
3. **Moisture Content Testing Requirement**
  - A. Cave City Sand, LLC Wash Plant # 1 shall verify that the moisture content of the unprocessed 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. The initial test shall be conducted no later than 45 days after the issuance of this permit.
  - D. The test samples shall be taken from rock that has not been processed by the plant or from each source of aggregate (e.g. sand mine; storage pile before sand is processed).

Page No.	5
Permit No.	
Project No.	2014-07-036

**SITE SPECIFIC SPECIAL CONDITIONS:**

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

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- 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 Cave City Sand, LLC Wash Plant # 1 main office within 30 days of completion of the required test.
  - F. If the moisture content of the test is less than the moisture content in Special Condition 3.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 3.A, Cave City Sand, LLC Wash Plant # 1 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, Cave City Sand, LLC Wash Plant # 1 may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the sand and blasted material.
- 4. **Minimum Distance to Property Boundary Requirement**  
The primary crusher (EU-01) shall be located at least 400 feet from the nearest property boundary.
  - 5. **Primary Equipment Requirement**  
Cave City Sand, LLC Wash Plant # 1 shall process all sand through the primary crusher (EU-01). Bypassing the primary crusher is prohibited.
  - 6. **Nonroad Engine Requirement**
    - A. Cave City Sand, LLC Wash Plant # 1'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.
    - B. Cave City Sand, LLC Wash Plant # 1 has operated at this site since approximately May 1, 2014. Since this plant's engines shall not remain at one location within this site longer than 12 consecutive months, the engines shall be moved to a different location within the site for production purposes (i.e., along face of quarry wall) or shall be removed from the site by May 1, 2015.

Page No.	6
Permit No.	
Project No.	2014-07-036

**SITE SPECIFIC SPECIAL CONDITIONS:**

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

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7. Record Keeping Requirement  
Cave City Sand, LLC Wash Plant # 1 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  
Cave City Sand, LLC Wash Plant # 1 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: 2014-07-036

Installation ID Number: PORT-0712

Permit Number:

Cave City Sand, LLC Wash Plant # 1  
8799 Trautman Quarry Road  
Pevely, MO 63070

Complete: August 5, 2014

Parent Company:  
Cave City Sand, LLC  
20 Cave Industrial Drive  
Festus, MO 63028

Jefferson County, Land Grant 932, T41N, R5E

PROJECT DESCRIPTION

Cave City Sand, LLC Wash Plant # 1 (Cave City) has applied for an Application for Authority to Construct to operate a new portable sand crushing and washing plant. This plant operates on leased land from Trautman Quarry (099-0012). Trautman Quarry also leases land to Breckenridge Material Company's concrete plant (099-0080) and Fred Weber, Inc. (099-0098). Breckenridge Material Company and Fred Weber, Inc. are considered separate installations on separate property. Breckenridge Material Company and Fred Weber, Inc. are not support facilities for Trautman Quarry or Cave City. Because Cave City is a portable plant it will be considered a separate owner plant and must balance its ambient impact with Trautman Quarry.

Cave City has operated at this site since approximately May 1, 2014 without a construction permit. A site near Crystal City, Missouri, where Cave City mines sand, received a notice of violation (NOV# 1112-001) from the Department's Land Recreation Program because they were operating without a permit. As a result, this application for the sand crushing and washing plant was received as a remedial action to be in compliance with the Air Pollution Control Program.

Cave City receives sand and blasted aggregate from off-site sources by haul trucks and the material is crushed and washed. The processed sand is hauled off by the same truck that brought material to the site. Only loaded trucks will travel on the site's haul roads.

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 Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM<sub>2.5</sub> standard and an attainment area for all other criteria pollutants. Part Jefferson County is a nonattainment area for lead. The installation is not located in the Jefferson County lead nonattainment area.

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 Cave City Sand, LLC Wash Plant # 1 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 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 compliance with the NAAQS for PM<sub>10</sub>.

**Table 1: Emissions Summary (tons per year)**

Air Pollutant	De Minimis Level/SMAL	<sup>a</sup> Potential Emissions of the Process Equipment	Existing Actual Emissions	<sup>b</sup> Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	1.81	N/A	97.55	76.83
PM <sub>10</sub>	15.0	0.76	N/A	27.39	21.61
PM <sub>2.5</sub>	10.0	0.16	N/A	7.95	6.27
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	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

<sup>a</sup> Excludes emissions from haul roads and storage pile emissions

<sup>b</sup> Includes site specific haul road and storage pile emissions

**Table 2: Ambient Air Quality Impact Analysis**

Pollutant	NAAQS (µg/m <sup>3</sup> )	Averaging Time	<sup>a</sup> Maximum Modeled Impact (µg/m <sup>3</sup> )	Limited Impact (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	<sup>b</sup> Daily Production (tons/day)
<sup>c</sup> PM <sub>10</sub> (same)	150.0	24-hour	N/D	130.00	20.0	N/D
<sup>d</sup> PM <sub>10</sub> (separate)	150.0	24-hour	16.99	12.54	137.46	4,728

N/D = Not Determined

<sup>a</sup> Modeled impact at maximum capacity with controls

<sup>b</sup> Indirect limit based on compliance with NAAQS. Per Construction Permit 052003-015A, plants not owned by Trautman Quarry are limited to ambient impact of 12.54 µg/m<sup>3</sup>. The daily production limit of PORT-0712 is indirectly based on compliance with the NAAQS for PM<sub>10</sub>. However, the daily production limit of PORT-0712 during the same owner operating scenario is not determined because Cave City can balance production between all plants they own and operate at this site.

<sup>c</sup> Operation with other plants that are owned by Cave City Sand, LLC at this site

<sup>d</sup> Operation with plants that are not owned by Cave City Sand, LLC

## 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 sand crushing and handling 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 sand is equal to or greater than 1.5 % by weight.

Emissions from the wash plant and its subsequent conveyor were considered negligible because of the high quantity of water that is used during this process.

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 PM<sub>10</sub> and a 40% control efficiency for PM<sub>2.5</sub> 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."

## 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 PM<sub>10</sub> for all asphalt, concrete and rock-crushing plants regardless of the level of PM<sub>10</sub> emissions if a permit is required. Rock-crushing plants include sand crushing and processing plants. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or 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 and not located at an existing quarry, 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 expect 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  $20.0 \mu\text{g}/\text{m}^3$  of  $\text{PM}_{10}$  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 Cave City Sand, LLC Wash Plant # 1 shall demonstrate compliance with the NAAQS.

- When plants that are owned by Cave City, which are referred to as same owner plants, are located at the site, Cave City must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS using Attachment A or another equivalent form.
- When plants that are not owned by Cave City, which are referred to as separate owner plants, are located at the site, Cave City must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by Cave City that are operating at the site. This total is limited below the NAAQS for  $\text{PM}_{10}$ . Per Construction Permit 052003-015A, plants not owned by Trautman Quarry at this site, are limited to an ambient impact of  $12.54 \mu\text{g}/\text{m}^3$ . Therefore, Cave City will limit the total impact of all plants they own and operate at the site to  $12.54 \mu\text{g}/\text{m}^3$  when any plants they do not own are located at the site. Cave City is not permitted to operate with any plant that is not owned by Cave City that has a separate owner background greater than  $117.46 \mu\text{g}/\text{m}^3$ . Emissions from haul roads and vehicular activity areas are addressed as a background concentration of  $20.0 \mu\text{g}/\text{m}^3$ . During this scenario, Cave City shall use Attachment B, or another equivalent form, to demonstrate compliance with the NAAQS for  $\text{PM}_{10}$ .

Cave City does not need to balance ambient impact with Breckenridge Material Company’s concrete plant (099-0080) and Fred Weber, Inc. (099-0098) because they are on separate properties and have their own haul roads. At this site, Cave City needs to balance ambient impact with Trautman Quarry (099-0012) and any other plant that operate on Trautman Quarry’s property.

## 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 PM<sub>10</sub> are above the de minimis level, but below major source levels.

## APPLICABLE REQUIREMENTS

Cave City Sand, LLC Wash Plant # 1 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.
- 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*, I recommend this permit be granted with special conditions.

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Daronn A. Williams  
New Source Review Unit

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Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 11, 2014, received July 16, 2014, designating Cave City Sand, 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 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

<b>%</b> .....percent	<b>MMBtu</b> ..... Million British thermal units
<b>°F</b> .....degrees Fahrenheit	<b>MMCF</b> ..... million cubic feet
<b>acfm</b> ..... actual cubic feet per minute	<b>MSDS</b> ..... Material Safety Data Sheet
<b>BACT</b> ..... Best Available Control Technology	<b>NAAQS</b> ..... National Ambient Air Quality Standards
<b>BMPs</b> ..... Best Management Practices	<b>NESHAPs</b> .. National Emissions Standards for Hazardous Air Pollutants
<b>Btu</b> ..... British thermal unit	<b>NO<sub>x</sub></b> .....nitrogen oxides
<b>CAM</b> ..... Compliance Assurance Monitoring	<b>NSPS</b> ..... New Source Performance Standards
<b>CAS</b> ..... Chemical Abstracts Service	<b>NSR</b> ..... New Source Review
<b>CEMS</b> ..... Continuous Emission Monitor System	<b>PM</b> ..... particulate matter
<b>CFR</b> ..... Code of Federal Regulations	<b>PM<sub>2.5</sub></b> ..... particulate matter less than 2.5 microns in aerodynamic diameter
<b>CO</b> ..... carbon monoxide	<b>PM<sub>10</sub></b> ..... particulate matter less than 10 microns in aerodynamic diameter
<b>CO<sub>2</sub></b> ..... carbon dioxide	<b>ppm</b> ..... parts per million
<b>CO<sub>2e</sub></b> ..... carbon dioxide equivalent	<b>PSD</b> ..... Prevention of Significant Deterioration
<b>COMS</b> ..... Continuous Opacity Monitoring System	<b>PTE</b> ..... potential to emit
<b>CSR</b> ..... Code of State Regulations	<b>RACT</b> ..... Reasonable Available Control Technology
<b>dscf</b> ..... dry standard cubic feet	<b>RAL</b> ..... Risk Assessment Level
<b>EQ</b> ..... Emission Inventory Questionnaire	<b>SCC</b> ..... Source Classification Code
<b>EP</b> ..... Emission Point	<b>scfm</b> ..... standard cubic feet per minute
<b>EPA</b> ..... Environmental Protection Agency	<b>SDS</b> ..... Safety Data Sheet
<b>EU</b> ..... Emission Unit	<b>SIC</b> ..... Standard Industrial Classification
<b>fps</b> ..... feet per second	<b>SIP</b> ..... State Implementation Plan
<b>ft</b> ..... feet	<b>SMAL</b> ..... Screening Model Action Levels
<b>GACT</b> ..... Generally Available Control Technology	<b>SO<sub>x</sub></b> ..... sulfur oxides
<b>GHG</b> ..... Greenhouse Gas	<b>SO<sub>2</sub></b> ..... sulfur dioxide
<b>gpm</b> ..... gallons per minute	<b>tph</b> ..... tons per hour
<b>gr</b> ..... grains	<b>tpy</b> ..... tons per year
<b>GWP</b> ..... Global Warming Potential	<b>VMT</b> ..... vehicle miles traveled
<b>HAP</b> ..... Hazardous Air Pollutant	<b>VOC</b> ..... Volatile Organic Compound
<b>hr</b> ..... hour	
<b>hp</b> ..... horsepower	
<b>lb</b> ..... pound	
<b>lbs/hr</b> ..... pounds per hour	
<b>MACT</b> ..... Maximum Achievable Control Technology	
<b>µg/m<sup>3</sup></b> ..... micrograms per cubic meter	
<b>m/s</b> ..... meters per second	
<b>Mgal</b> ..... 1,000 gallons	
<b>MW</b> ..... megawatt	
<b>MHDR</b> ..... maximum hourly design rate	

Mr. Dee Jay Huckie  
C.O.O.  
Cave City Sand, LLC Wash Plant # 1  
20 Cave Industrial Drive  
Festus, MO 63028

RE: New Source Review Permit - Project Number: 2014-07-036

Dear Mr. Huckie:

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.

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 is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: [www.aa.mo.gov/ahc](http://www.aa.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.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:dwl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2014-07-036  
Permit Number: