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: 022017-001
Project Number: 2016-11-015
Installation ID: 023-0074

Parent Company: Cane Creek Quarry, LLC
Parent Company Address: 2179 County Road 321, Popular Bluff, MO 63901
Installation Name: Cane Creek Stone, Inc.
Installation Address: 2179 County Road 321, Popular Bluff, MO 63901
Location Information: Butler County, S36 T24N R5E

Application for Authority to Construct was made for: Installation of an additional crusher Eagle 400 Impactor, 2-deck screen, associated conveyors and engines. 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
Kathy Kolb
New Source Review Unit

Director or Designee
Department of Natural Resources
FEB 01 2017

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/
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. Superseding Condition
   The conditions of this permit supersede all special conditions found in the previously issued construction permit 042015-003 from the Air Pollution Control Program.

2. Best Management Practices Requirement
   Cane Creek Stone, 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.

3. Annual Emission Limit
   A. Cane Creek Stone, Inc. shall emit less than 15.0 tons of PM$_{10}$ in any 12-month period from the entire installation (See Table 1 for Equipment List for the entire installation.)

   B. Cane Creek Stone, Inc. shall demonstrate compliance with Special Condition 3.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Moisture Content Testing Requirement
   A. Cane Creek Stone, 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. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.

   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 Cane Creek Stone, Inc. main office within 30 days of completion of the required test.
GENERAL SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 4.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 4.A, Cane Creek Stone, 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, Cane Creek Stone, Inc. may obtain test results that demonstrate compliance with the moisture content in Special Condition 4.A from the supplier of the aggregate.

5. Primary Equipment Requirement
Cane Creek Stone, Inc. shall process all rock through the primary crusher (EU-03). Bypassing the primary crusher is prohibited.

6. Fuel Requirement-Engine(s)
A. Cane Creek Stone, Inc. shall burn exclusively ultra low sulfur diesel fuel in its engines (EP-8) with a sulfur content less than or equal to 15 parts per million by weight (0.0015 percent by weight).
B. Cane Creek Stone, Inc. shall demonstrate compliance with Special Condition 6.A by obtaining records of the fuel's sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 Reference Methods.

7. Diesel Engine Operational Restrictions
The rock-crushing plant shall not operate its diesel engine(s) for any purpose other than warming up before production (not to exceed two hours) and powering equipment production.

8. Record Keeping Requirement
Cane Creek Stone, 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.

9. Reporting Requirement
Cane Creek Stone, 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.
Cane Creek Stone, Inc.
2179 County Road 321
Popular Bluff, MO 63901

Parent Company:
Cane Creek Quarry, LLC
2179 County Road 321
Popular Bluff, MO 63901

Butler County, S36 T24N R5E

PROJECT DESCRIPTION

Cane Creek Stone is an existing limestone quarry operation located at 2179 County Road 321 near Poplar Bluff in Butler County, Missouri. The existing quarry operation was originally permitted with the Air Pollution Control Program in 2015 (Permit #042015-003). The engine emissions were not included at that time because the engines were classified as non-road engines. Cane Creek Stone has requested to now include in this permit an existing engine (2015 John Deere 500 HP Tier 3) and a genset 2013 CAT S/N N4R00340 (PIN # CAT00C44CD4DO02772) as well as a new Eagle 400 Impactor (tertiary crusher, EU-15), a 2-deck screen (EU-18), associated conveyors, and a 2005 John Deere 215 HP engine. The Kleeman Jaw Crusher is designated as the primary crusher (EU-03) with a MHDR of 279 tons per hour.

Shot rock will initially be crushed by the Kleeman Jaw Crusher (primary crusher EU-03) and then crushed aggregate is hauled approximately 500 feet to the Eagle 1400 Impactor (secondary crusher EU-07). 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. Combined stock piles will cover 1 acre

Cane Creek Stone will take a facility wide de minimis PM_{10} limit of 15 tons per year that will include all of the equipment at this site as listed in Table1.
Table 1: Equipment List for the entire installation (Site ID:023-0074)

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Equipment</th>
<th>Make/Model</th>
<th>Capacity (tons/ hour)</th>
<th>MFG Year</th>
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<tbody>
<tr>
<td>EU-01</td>
<td>Truck unloading</td>
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<td></td>
</tr>
<tr>
<td>EU-02</td>
<td>Grizzly Feeder</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-03</td>
<td>Primary Crusher</td>
<td>Kleeman Jaw Crusher</td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-04</td>
<td>Underconveyor</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-05</td>
<td>Truck unloading from primary crusher</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-06</td>
<td>Grizzly</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-07</td>
<td>Secondary Crusher</td>
<td>Eagle 1400 Impactor</td>
<td>279 2015</td>
<td></td>
</tr>
<tr>
<td>EU-08</td>
<td>Under conveyor from secondary crusher</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-09</td>
<td>Conveyor to 3-deck screen</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-10</td>
<td>3-deck screen</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-11</td>
<td>Side conveyor from 3-deck screen</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EU-12</td>
<td>Side conveyor from 3-deck screen</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EU-13</td>
<td>Side conveyor from 3-deck screen</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EU-14</td>
<td>Conveyor to Eagle 400</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-15</td>
<td>Tertiary Crusher (new)</td>
<td>Eagle 400 Impactor</td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-16</td>
<td>Under conveyor from Eagle 400 (new)</td>
<td></td>
<td>279</td>
<td></td>
</tr>
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<td>EU-17</td>
<td>Conveyor to 2 deck screen (new)</td>
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<td>279</td>
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<tr>
<td>EU-18</td>
<td>2 deck screen (new)</td>
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<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-19</td>
<td>Side Conveyor from 2 deck screen (new)</td>
<td>279</td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-20</td>
<td>Side Conveyor from 2 deck screen (new)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EU-21</td>
<td>Side Conveyor from 2 deck screen (new)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EU-22</td>
<td>CAT Genset</td>
<td>Catepillar</td>
<td>100 kw(e) 2003</td>
<td></td>
</tr>
<tr>
<td>EU-23</td>
<td>John Deere Engine</td>
<td>John Deere</td>
<td>500 HP 2015</td>
<td></td>
</tr>
<tr>
<td>EU-24</td>
<td>John Deere Engine (new)</td>
<td>John Deere</td>
<td>215 HP 2005</td>
<td></td>
</tr>
<tr>
<td>EU-25a</td>
<td>Stockpile load-in</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-25b</td>
<td>Stockpile load-out</td>
<td></td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>EU-25c</td>
<td>Stockpile vehicular activity</td>
<td>100 ft</td>
<td>100 ft</td>
<td></td>
</tr>
<tr>
<td>EU-25d</td>
<td>Stockpile wind erosion</td>
<td>1 acre</td>
<td>1 acre</td>
<td></td>
</tr>
<tr>
<td>EU-26</td>
<td>Haul road from Kleeman</td>
<td></td>
<td>500 ft</td>
<td>500 ft</td>
</tr>
<tr>
<td>EU-27</td>
<td>Shipping haul road</td>
<td></td>
<td>500 ft</td>
<td></td>
</tr>
</tbody>
</table>

*Emissions were calculated that 100% product was be transferred across one conveyor off of each screen

This installation is located in Butler 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.

TABLES

The following permits have been issued to Cane Creek Stone, Inc. from the Air Pollution Control Program.
The Table 3 below summarizes the emissions of this project. The potential emissions of the process equipment exclude emissions from haul roads and wind erosion. There are no existing actual emissions because this facility was originally permitted in 2015 and has not operated a full calendar year. 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 include emissions from sources that will limit their production to ensure compliance with the annual emission limit. Conditioned potential emissions account for a voluntary annual PM$_{10}$ emission limit of 15.0 tons per year for the entire facility in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3.

Table 3: Emissions Summary (tons per year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25.0</td>
<td>12.96</td>
<td>N/D</td>
<td>63.74</td>
<td>39.10</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>5.53</td>
<td>N/D</td>
<td>24.45</td>
<td>&lt;15.00</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>10.0</td>
<td>1.43</td>
<td>N/D</td>
<td>5.23</td>
<td>3.21</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>40.0</td>
<td>0.05</td>
<td>N/D</td>
<td>0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>40.0</td>
<td>18.06</td>
<td>N/D</td>
<td>18.06</td>
<td>11.08</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>5.90</td>
<td>N/D</td>
<td>5.90</td>
<td>3.62</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>23.10</td>
<td>N/D</td>
<td>23.10</td>
<td>14.17</td>
</tr>
<tr>
<td>GHG (CO$_2$e)</td>
<td>75,000 / 100,000</td>
<td>4,843.67</td>
<td>N/D</td>
<td>4,843.67</td>
<td>2,971.39</td>
</tr>
<tr>
<td>GHG (mass)</td>
<td>0.0 / 100.0 / 250.0</td>
<td>4,827.43</td>
<td>N/D</td>
<td>4,827.43</td>
<td>2,961.43</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>25.0</td>
<td>0.11</td>
<td>N/D</td>
<td>0.11</td>
<td>0.07</td>
</tr>
</tbody>
</table>

N/D = Not Determined

*Potential Emissions of Process Equipment (tons/yr)

*Includes 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 greater than 1.5 % by weight.
Emissions from the diesel engines were calculated using emission factors from AP-42 Section 3.3 Gasoline and Diesel Industrial Engines," October 1996 and Section 3.4 "Large Stationary Diesel and All Stationary Dual-fuel Engines," October 1996 for VOC, HAPs, and PM condensable. PM filterable, NOx, and CO emissions were calculated using emission factors from 40 CFR 89 (Tier 1-3) and 40 CFR 1039 (Tier 4). SO2 emissions were calculated using a mass balance equation. Greenhouse gasses were calculated using equations from 40 CFR 98, Tables C-1 & C-2, November 29, 2013.

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 74% control efficiency for PM2.5 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.”

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM10 emission limit of 15.0 tons per year for stationary plants in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

APPLICABLE REQUIREMENTS

Cane Creek Stone, 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.

GENERAL REQUIREMENTS

- Operating Permits, 10 CSR 10-6.065, the operating permit is required as NSPS OOO applies. Typically, submittal of a Basic operating permit application is required within 30 days after a construction permit is issued. However, there is a proposed rulemaking to remove the requirement to obtain a Basic operating permit for de minimis installations if the only criteria triggering the operating permit is NSPS.
applicability. Contact the Air Pollution Control Program’s Operating Permit Unit for an update prior to submitting an application.

- **Start-Up, Shutdown, and Malfunction Conditions, 10 CSR 10-6.050**
- **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.**
- **40 CFR Part 60, Subpart III - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

**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 form, dated November 2, 2016, received November 7, 2016, designating Cane Creek Quarry, LLC as the owner and operator of the installation.
Attachment A: PM$_{10}$ Annual Emissions Tracking Sheet
Cane Creek Stone, Inc. 023-0074
Project Number: 2016-11-015
Permit Number: 022017-001

This sheet covers the period from __________ to __________ (Copy as needed)
(Month, Day Year) (Month, Day Year)

<table>
<thead>
<tr>
<th>Month</th>
<th>Production (tons)</th>
<th>Emission Factor (lb/ton)</th>
<th>Monthly Emissions$^1$ (lbs)</th>
<th>Monthly Emissions$^2$ (tons)</th>
<th>12-Month Total Emissions$^3$ (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>125,000</td>
<td>0.0200</td>
<td>2,500</td>
<td>1.25</td>
<td>13.75</td>
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<td></td>
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<td>0.0200</td>
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<td></td>
<td>0.0200</td>
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</tr>
</tbody>
</table>

$^1$Multiply the monthly production by the emission factor.
$^2$Divide the monthly emissions (lbs) by 2000.
$^3$Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 15.0 of PM$_{10}$ is necessary for compliance.
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 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.
APPENDIX A

Abbreviations and Acronyms

% ............ percent
°F .......... degrees Fahrenheit
acfm ...... actual cubic feet per minute
BACT ....... Best Available Control Technology
BMPs ...... Best Management Practices
Btu .......... British thermal unit
CAM ......... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS ...... Continuous Emission Monitor System
CFR ........ Code of Federal Regulations
CO .......... carbon monoxide
CO₂ ......... carbon dioxide
CO₂e ...... carbon dioxide equivalent
COMS ...... Continuous Opacity Monitoring System
CSR ........ Code of State Regulations
dscf .... dry standard cubic feet
EIQ .......... Emission Inventory Questionnaire
EP ........... Emission Point
EPA .......... Environmental Protection Agency
EU .......... Emission Unit
fps ...... feet per second
ft ........ feet
GACT ...... Generally Available Control Technology
GHG .......... Greenhouse Gas
gpm ........ gallons per minute
gr .......... grains
GWP ...... Global Warming Potential
HAP ...... Hazardous Air Pollutant
hr .......... hour
hp .......... horsepower
lb .......... pound
lbs/hr ...... pounds per hour
MACT ...... Maximum Achievable Control Technology
µg/m³ ...... micrograms per cubic meter
m/s ......... meters per second
Mgal ...... 1,000 gallons
MW .......... megawatt
MHDR ....... maximum hourly design rate

MMBtu ... Million British thermal units
MMCF .... million cubic feet
MSDS .... Material Safety Data Sheet
NAAQS .... National Ambient Air Quality Standards
NESHAPs .. National Emissions Standards for Hazardous Air Pollutants
NOₓ ......... nitrogen oxides
NSPS ...... New Source Performance Standards
NSR ....... New Source Review
PM .......... particulate matter
PM₂.₅ .... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ ...... particulate matter less than 10 microns in aerodynamic diameter
ppm ........ parts per million
PSD ........ Prevention of Significant Deterioration
PTE .......... potential to emit
RACT ...... Reasonable Available Control Technology
RAL ...... Risk Assessment Level
SCC .......... Source Classification Code
scfm ...... standard cubic feet per minute
SDS .......... Safety Data Sheet
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL ...... Screening Model Action Levels
SOₓ ....... sulfur oxides
SO₂ ......... sulfur dioxide
tph .......... tons per hour
tpy .......... tons per year
VMT ......... vehicle miles traveled
VOC ....... Volatile Organic Compound
**NOTICE:** This spreadsheet is for your use only and should be used with caution. MoDNR does not guarantee the accuracy of the information it contains. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current, accurate and complete information available. MoDNR is not responsible for errors or omissions in this spreadsheet. Submission of the information contained in this spreadsheet (workbook) does not relieve the responsible official of the certification statement signed on the first page of the application.

### For Single Plant Operation

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<th>Pollutant</th>
<th>Potential Emissions of Process Equipment (tons/yr)</th>
<th>Potential Emissions including fugitives (tons/yr)</th>
<th>Allowable Emissions for 5374 hours per year (tons/yr)</th>
<th>Deminimis Thresholds</th>
<th>Plant-wide Composite Emission Factor (lb/ton)</th>
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### Maximum Hourly Design Rate (tons/hr)

279

### Tons of Product

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<td>Tons of product per year</td>
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Dear Mr. Williams:

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, your new source review permit application and with your amended operating 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.

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 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, please do not hesitate to contact Kathy Kolb, at the department’s Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

Enclosures

c: Southeast Regional Office
PAMS File: 2016-11-015

 Permit Number: 022017-001