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: 022009-001 Project Number: 2009-01-019

Parent Company: Ray County Stone Producers, LLC
Parent Company Address: 17279 Maddux Road, Rayville, MO 64084
Installation Name: Ray County Stone Producers, LLC
Installation Address: 17279 Maddux Road, Rayville, MO 64084
Location Information: Ray County, S14/15, T53N, R28W

Application for Authority to Construct was made for: The modification of an existing portable rock crushing plant (PORT-0623) to a stationary rock crushing plant. Rock is processed through 1 crusher, 3 screens, 13 conveyors, and 3 bins. The rock crushing plant has a maximum hourly design rate (MHDR) of 450 tons per hour (tph). Best Management Practices will be used to control fugitive emissions from haul roads and storage piles. This review was conducted in accordance with Section (5), 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.

FEB - 2 2009

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES
STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years/18 months 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/18 months 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 devises shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the departments’ Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 RS Mo 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.
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); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority”; by 10 CSR 10-6.010 “Ambient Air Quality Standards” and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.

1. Best Management Practices
   Ray County Stone Producers, LLC shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing Best Management Practices, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.

2. National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM$_{10}$)
   A. The operator(s) for Ray County Stone Producers, LLC’s rock crushing plant (177-0041) shall ensure, while operating at this site, that the ambient impact of PM$_{10}$ at or beyond the nearest property boundary does not exceed 150 µg/m$^3$ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
   B. The total daily ambient impact of PM$_{10}$ at this site shall include the combined impact of the rock crushing plant and any ambient background concentration from installations or equipment located on the same site as the rock crushing plant.
   C. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. Attachment A, Daily Ambient PM$_{10}$ Impact Tracking Record, or other equivalent form(s), will be used for this purpose.
   D. To demonstrate compliance during concurrent (same owner) and concurrent (same and separate owners) operations, the operator(s) shall maintain a daily record of material processed.
      i.) For concurrent (same owner) operations, Attachment A, Daily Ambient PM$_{10}$ Impact Tracking Record, Concurrent (Same Owner) Operations, or other equivalent form(s), shall be used for this purpose.
      ii.) For concurrent (same and separate owners) operations, Attachment B, Daily Ambient PM$_{10}$ Impact Tracking Record, Concurrent (Same and Separate Owners) Operations, or other equivalent form(s), shall be used for this purpose.

3. Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM$_{10}$)
   A. The operator(s) shall ensure that Ray County Stone Producers, LLC’s rock crushing plant emits less than 15.0 tons of PM$_{10}$ into the atmosphere in any 12-month period.
   B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM$_{10}$. Attachment B, Monthly PM$_{10}$ Emissions Tracking Record, or other equivalent form(s), will be used for this purpose.

4. Performance Testing for New Source Performance Standards (NSPS)
   A. Ray County Stone Producers, LLC shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart “OOO”. Ray County Stone Producers, LLC shall contact the Enforcement section to obtain all requirements for testing, and the plan must be submitted to the Enforcement section at least 30 days prior to the proposed test date.
   B. Testing must be performed no later than 60 days after achieving the maximum production rate of the process, and in any case no later than 180 days after initial startup. The performance test results shall be submitted to the Enforcement section no later than 30 days after completion of any required testing.
   C. If testing has already been performed, proof of compliance must be maintained on site.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

5. Restriction on Process Configuration of Primary Emission Point(s)
The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). Ray County Stone Producers, LLC has designated the following unit(s) as the primary emission point(s) of the rock crushing plant: primary crusher (EP1) Bypassing the primary emission point(s) for processing is prohibited.

6. Restriction on Minimum Distance to Nearest Property Boundary
The primary emission point of the rock crushing plant, which is the primary crusher (EP1), shall be located at least 800 feet from the nearest property boundary whenever it is operating at this site.

7. Record Keeping Requirement
The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Missouri Department of Natural Resources’ personnel upon request.

8. Reporting Requirement
The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.

9. Conveyor Orientation
The orientation of each conveyor for this installation, displayed on the Process Flow Diagram within the permit application, must remain the same in order to operate under this permit.

10. Superseding Condition
The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (092008-003, 112006-010A, 112006-010, 092004-013, 112004-008, 072002-016A, 072002-016) from the Air Pollution Control Program.
TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Ray County Stone Producers, LLC has applied for a new de minimis construction permit. It is their desire to convert the current portable rock crushing plant (PORT-0623) located at Maddux Road Quarry into a stationary plant and will be considered a new installation. The current stationary plant in Maddux Road Quarry is being dismantled and will no longer be used. The equipment at the installation will include all of the equipment used by PORT-0623, one screen and eight conveyors from the existing stationary plant that is being removed, and one new screen. Processing equipment is powered with one (1) diesel engine(s). All previous construction permits have been superseded. The installation is located in Ray County, a maintenance area for ozone (O₃) and an attainment area for all other criteria air pollutants.

The rock-crushing plant is permitted to operate under three (3) scenarios.

- Solitary Operations: Operations when the rock-screening plant is the only plant located at the site.
- Concurrent (Same Owner) Operations: Operations when other asphalt, concrete, rock-crushing, or rock-crushing plants owned by Ray County Stone Producers, LLC, Inc. are located at the site.
- Concurrent (Same and Separate Owner) Operations: Operations when other asphalt, concrete, rock-crushing, or rock-screening plants owned by other companies are located at this site at the same time as other asphalt, concrete, rock-crushing, or rock-screening plants owned by Gabel Stone Company, Inc.

Table 1, Other Permits Issued for Site 177-0041

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Completed</th>
<th>Description</th>
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<tr>
<td>092008-003</td>
<td>9/15/2008</td>
<td>Rock Crushing plant section(5)</td>
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<tr>
<td>112006-010A</td>
<td>9/11/2008</td>
<td>Allow collocation</td>
</tr>
<tr>
<td>112006-010</td>
<td>11/14/2006</td>
<td>Remove concrete, update quarry production</td>
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<td>092004-013</td>
<td>9/29/2004</td>
<td>Concrete Mix Plant</td>
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<td>112004-008</td>
<td>11/17/2004</td>
<td>Concurrent operation with concrete plant</td>
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<tr>
<td>072002-016A</td>
<td>11/5/2003</td>
<td>Revise emission limits</td>
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<tr>
<td>072002-016</td>
<td>7/24/2002</td>
<td>New rock-crushing plant section(5)</td>
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EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is PM₁₀. The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, appropriate emission factors, control device efficiencies, and the limiting operating hours at MHDR. The sources of the emission factors and control efficiencies are listed in the section "Permit Documents". Based on the conditioned potential emissions, the operation is considered a de minimis source under 10 CSR 10-6.060 section (5).

The rock crushing plant has an annual emission limit of less than 15 tons of PM₁₀ in any 12-month period. A composite PM₁₀ emission factor was developed for the rock crushing plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment C. If the conditioned potential emissions of PM₁₀ were 15 tons per year or greater, then the owner would be required to submit dispersion modeling results.

Table 2: Emissions Summary (tons per year)

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<tr>
<td>PM₁₀</td>
<td>15.0</td>
<td>81.75</td>
<td>0.47</td>
<td>80.79</td>
<td>&lt;15.0</td>
<td>0.0456</td>
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<td>SOx</td>
<td>40.0</td>
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<tr>
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<td>40.0</td>
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<td>N/A</td>
<td>N/A</td>
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<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: N/A = Not Applicable
* Existing potential emissions taken from permit # 092008-003.
** Conditioned potential based on voluntary limit.
**AMBIENT AIR QUALITY IMPACT ANALYSIS**

Screening tools were used to evaluate the ambient air impact of the hourly emissions from this operation. The ambient impact was evaluated at a distance of 800 feet to the nearest property boundary. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/m³ of PM₁₀ at or beyond the nearest property boundary in any single 24-hour period. The screening tools were used to develop an ambient impact factor for the rock crushing plant. This ambient impact factor is incorporated into the daily record keeping table, Attachment A.

For sources agreeing to use Best Management Practices (BMPs), as defined in Attachment AA, haul roads and stockpiles are not modeled with screening tools. Instead, they are addressed as a background level of 20 µg/m³ of PM₁₀. To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 µg/m³ of PM₁₀ at or beyond the nearest property boundary.

The record keeping requirements for each operating scenario are as follows.

- **Solitary Operations:** The ambient impact from stationary rock crushing plant owned by Ray County Stone Producers is included as a set value of 130 µg/m³. A background level of 20.00 µg/m³ is reserved for the use of Best Management Practices. The stationary rock crushing plant must track its own daily PM₁₀ ambient impact to ensure that the total daily PM₁₀ ambient impact does not exceed 150 µg/m³.

- **Concurrent (Same Owner) Operations:** The ambient impact from the stationary rock crushing plant and other asphalt, concrete, rock-crushing plants owned by Ray County Stone Producers is included as a set value of 130 µg/m³. A background level of 20.00 µg/m³ is reserved for the use of Best Management Practices. The stationary rock crushing plant must track not only its own daily PM₁₀ ambient impact, but also that of all other asphalt, concrete, rock-crushing plants owned by Ray County Stone LLC to ensure that the total daily PM₁₀ ambient impact from these plants does not exceed 150 µg/m³.

- **Concurrent (Separate and Same Owners) Operations:** The ambient impact from the stationary rock-crushing plant, asphalt, concrete, rock-crushing plants owned by Ray County Stone Producers, LLC is included as a set value of 97.23 µg/m³. Background level of 20.00 µg/m³ is reserved for the use of Best Management Practices, and 32.77 µg/m³ can be used by other asphalt, concrete, rock-crushing, plants owned by other companies. The stationary rock crushing plant must track not only its own daily PM₁₀ ambient impact, but also that of all other asphalt, concrete, rock-crushing, or rock-screening plants owned by Ray County Stone to ensure that the total daily PM₁₀ ambient impact from these plants does not exceed 117.23 µg/m³.

### Table 3: Ambient Air Quality Impact Analysis of PM₁₀, 24-Hour Averaging Time

<table>
<thead>
<tr>
<th>Operation</th>
<th>Ambient Impact Factor (µg/m³/ton)</th>
<th>Modeled Impact (µg/m³)</th>
<th>*Background (µg/m³)</th>
<th>NAAQS (µg/m³)</th>
<th>Daily Production Limit (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Solitary</td>
<td>0.0285</td>
<td>130.00</td>
<td>20.00</td>
<td>150.00</td>
<td>4568</td>
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<td>2. Concurrent, Same Owner</td>
<td>0.0285</td>
<td>**</td>
<td>20.00</td>
<td>150.00</td>
<td>**</td>
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<tr>
<td>3. Concurrent, Separate Owners</td>
<td>0.0294</td>
<td>97.23</td>
<td>52.77</td>
<td>150.00</td>
<td>3306</td>
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<tr>
<td>4. Concurrent, Same and Separate Owners</td>
<td>0.0294</td>
<td>**</td>
<td>52.77</td>
<td>150.00</td>
<td>**</td>
</tr>
</tbody>
</table>

* Background PM₁₀ level of 20.00 µg/m³ from haul roads and stockpiles

** The operator(s) must balance production among concurrently operating plants, with the ambient impact factors for each, such that NAAQS is not exceeded. Other ambient impact factors are listed in Attachment A.
APPLICABLE REQUIREMENTS

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110
- Operating Permits, 10 CSR 10-6.065
- No Operating Permit is required for this rock crushing plant.
- 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 10-3.090
- Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400
- Restriction of Emission of Sulfur Compounds, 10 CSR 10-6.260
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not apply to the proposed equipment.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required, I recommend this permit be granted with special conditions.

Gerad Fox  Date
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Ray County Stone Producers, LLC as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Kansas City Regional Office Site Survey.
- Best Management Practices
### Attachment A: Daily Ambient PM₁₀ Impact Tracking Record

**Ray County Stone Producers, LLC, 177-0041 – Rock Crushing Plant**

**For Use During Solitary and Concurrent (Same Owner) Operations**

**Project Number:** 2009-01-19  
**County, CSTR:** Ray County (S14/15, T53N, R28W)  
**Primary Unit Size:** 450 tph  
**Distance to Nearest Property Boundary:** 800 feet

This sheet covers the period from ______________ to ______________ (Month, Day, Year) *(Copy this sheet as needed.)*

<table>
<thead>
<tr>
<th>Date</th>
<th>Daily Production (tons)</th>
<th>Ambient Impact Factor (µg/m³/ton)</th>
<th>¹Daily PM₁₀ Impact (µg/m³)</th>
<th>²Daily PM₁₀ Impact (µg/m³)</th>
<th>³Daily PM₁₀ Impact (µg/m³)</th>
<th>⁴Total PM₁₀ Level (µg/m³)</th>
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<tr>
<td></td>
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</table>

Note 1: The Daily PM₁₀ Impact (µg/m³) for the rock-crushing plant (PORT-0627) is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor (µg/m³/ton).

Note 2: The Daily PM₁₀ Impact (µg/m³) for other asphalt, concrete, rock-crushing, or rock-screening plants can be obtained from the operator(s) of these plants that owned by Gabel stone Co.

Note 3: Background PM₁₀ Level (µg/m³) is from Haul Roads and Stockpiles.

Note 4: The TOTAL PM₁₀ Level (µg/m³) is calculated by summing the Daily PM₁₀ Ambient Impact(s) and the Background PM₁₀ Level. A TOTAL PM₁₀ Level of less than 150 µg/m³ in any 24-hour period indicates compliance.
Attachment B: Daily Ambient PM<sub>10</sub> Impact Tracking Record
Ray County Stone Producers, LLC, 177-0041 – Rock Crushing Plant
For Use During Concurrent (Separate Owners) and Concurrent (Same and Separate Owners) Operations

Project Number: 2009-01-19
County, CSTR: Ray County (S14/15, T53N, R28W)
Primary Unit Size: 450 tph
Distance to Nearest Property Boundary: 800 feet

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

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<tr>
<th>Date</th>
<th>Daily Production (tons)</th>
<th>Ambient Impact Factor (µg/m³/ton)</th>
<th>&lt;sup&gt;1&lt;/sup&gt;Daily PM&lt;sub&gt;10&lt;/sub&gt; Impact (µg/m³)</th>
<th>&lt;sup&gt;2&lt;/sup&gt;Daily PM&lt;sub&gt;10&lt;/sub&gt; Impact (µg/m³)</th>
<th>&lt;sup&gt;3&lt;/sup&gt;Daily PM&lt;sub&gt;10&lt;/sub&gt; Impact (µg/m³)</th>
<th>Background PM&lt;sub&gt;10&lt;/sub&gt; Level (µg/m³)</th>
<th>TOTAL PM&lt;sub&gt;10&lt;/sub&gt; Level (µg/m³)</th>
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Note 1: The Daily PM<sub>10</sub> Impact (µg/m³) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.

Note 2: The Daily PM<sub>10</sub> Impact (µg/m³) for other asphalt, concrete, rock-crushing, or rock-screening plants can be obtained from the operator(s) of these plants that owned by Gabel stone Co.

Note 3: Background PM<sub>10</sub> Impact (µg/m³) is from Haul Roads and Stockpiles and the operations of other asphalt, concrete, rock-crushing, or rock-screening plants owned by other companies.

Note 4: The TOTAL PM<sub>10</sub> Level (µg/m³) is calculated by summing the Daily PM<sub>10</sub> Ambient Impact(s) and the Background PM<sub>10</sub> Level. A TOTAL PM<sub>10</sub> Level of less than 150 µg/m³ in any 24-hour period indicates compliance.
Attachment B: Monthly PM\textsubscript{10} Emissions Tracking Record
Ray County Stone Producers, LLC, 177-0041 – Rock Crushing Plant

Project Number: 2009-01-19
County, CSTR: Ray County (S14/15, T53N, R28W)
Primary Unit Size: 450 tph
Distance to Nearest Property Boundary: 800 feet

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

<table>
<thead>
<tr>
<th>Month</th>
<th>Monthly Production (tons)</th>
<th>Composite PM\textsubscript{10} Emission Factor (lbs/ton)</th>
<th>¹Monthly PM\textsubscript{10} Emissions (lbs)</th>
<th>²Monthly PM\textsubscript{10} Emissions (tons)</th>
<th>³12-Month PM\textsubscript{10} Emissions (tons/year)</th>
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</table>

Note 1: The Monthly Emissions (lbs) are calculated by multiplying the Monthly Production (tons) by the Composite Emission Factor (lbs/ton).
Note 2: The Monthly Emissions (tons) are calculated by dividing the Monthly Emissions (lbs) by 2,000.
Note 3: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month’s Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than 15.0 tons in any consecutive 12-month period indicates compliance.
Attachment AA: Best Management Practices (BMPs)- Construction Industry
Fugitive Emissions

Construction Industry Sites covered by the Interim Relief Policy shall maintain Best Management Control Practices (BMPs) for fugitive emission areas at their installations when in operation. Options for BMPs are at least one of the following:

For Haul Roads:

1. **Pavement of Road Surfaces** –
   A. The operator(s) may pave all or any portion of the haul roads with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve “Control of Fugitive Emissions” while the plant is operating.
   B. Maintenance and/or 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(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. **Usage of Chemical Dust Suppressants** –
   A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the unpaved portions of the haul roads. The suppressant will be applied in accordance with the manufacturer’s suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
   B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
   C. The operator(s) 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(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. **Usage of Documented Watering** –
   A. The operator(s) shall control the fugitive emissions from all the unpaved portions of the haul roads at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating. For example, the operator(s) shall calculate the total square feet of unpaved vehicle activity area requiring control on any particular day, divide that product by 1,000, and multiply the quotient by 100 gallons for that day.
   B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operation (e.g., meteorological situations, precipitation events, freezing, etc.)
   C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
   D. 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. The operator(s) shall record a brief description of such events in the same log as the documented watering.
   E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

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1 For 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.)
For Vehicle Activity Areas around Open Storage Piles:

1. **Pavement of Stockpile Vehicle Activity Surfaces** –
   
   **A.** The operator(s) may pave all or any portion of the vehicle activity areas around the storage piles with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating.

   **B.** Maintenance and/or 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(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. **Usage of Chemical Dust Suppressants** –
   
   **A.** The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the vehicle activity areas around the open storage piles. The suppressant will be applied in accordance with the manufacturer’s suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

   **B.** The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.

   **C.** The operator(s) 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(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

3. **Usage of Documented Watering** –
   
   **A.** The operator(s) shall control the fugitive emissions from all the vehicle activity areas around the storage piles at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating. (Refer to example for documented watering of haul roads.)

   **B.** The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operations (e.g., meteorological situations, precipitation events, freezing, etc.)

   **C.** Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.

   **D.** 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. The operator(s) shall record a brief description of such events in the same log as the documented watering.

   **E.** The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.