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: 042010-004  Project Number: 2010-02-086

Parent Company: APAC - Missouri, Inc.

Parent Company Address: PO Box 23910, Overland Park, KS 66283

Installation Name: APAC - Missouri, Inc.

Installation ID: 219-0042

Installation Address: 405 Highway J, Wright City, MO 63390

Location Information: Warren County, S10, T47N, R1W

Application for Authority to Construct was made for:

The replacement of the primary crusher and the addition of a diesel engine and twenty-seven (27) conveyors to the generic capacity of the plant. 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.

EFFECTIVE DATE

APR 07 2010

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 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 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.
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 permits 022005-002 and 112004-006 from the Air Pollution Control Program.

2. Generic Plant Designation and Maximum Combined Hourly Design Rate
   APAC - Missouri, Inc. has been designated to be a Generic Plant Operation. The combined Maximum Hourly Design Rate (MHDR) of each of the following generic equipment types shall not exceed the rates and numbers listed below.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Maximum Combined Hourly Design Rate</th>
<th>Maximum Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeder/Grizzly</td>
<td>625 tons per hour</td>
<td>1</td>
</tr>
<tr>
<td>Primary Unit(s) (Primary Crusher)</td>
<td>550 tons per hour</td>
<td>1</td>
</tr>
<tr>
<td>Secondary Crusher (s)</td>
<td>550 tons per hour</td>
<td>1</td>
</tr>
<tr>
<td>Conveyor(s), Stacker(s)</td>
<td>27,500 tons per hour</td>
<td>50</td>
</tr>
<tr>
<td>Screen(s)</td>
<td>1,800 tons per hour</td>
<td>3</td>
</tr>
<tr>
<td>Diesel Engine</td>
<td>0.0849 Mgal/hr</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Generic Plant Equipment Identification Requirement
   A. APAC - Missouri, Inc. shall submit the following information to the Air Pollution Control Program’s Permitting Section and the St. Louis Regional Office within 15 days of actual startup.
      1) A master list of all equipment that will be permitted for use with the generic plant. This master list shall include at minimum the following information for each piece of equipment:
         a.) Manufacturer’s name
         b.) Model number
         c.) Serial number
         d.) Actual MHDR
         e.) Date of manufacture
         f.) Any other additional information that is necessary to uniquely identify the equipment.
      2) A list of the core equipment that will always be utilized with the generic plant. The core equipment associated with the generic plant shall include at least one primary unit that controls the rate of the process flow (e.g., a primary crusher or primary screen).
GENERAL SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

- Each piece of equipment indicating whether each piece of equipment is subject to Subpart OOO and justification for this determination.

4) APAC - Missouri, Inc. shall notify the Air Pollution Control Program’s Permitting Section and the St. Louis Regional Office when new equipment is added to the master list and when core equipment is changed within 30 days of the change.

B. APAC - Missouri, Inc. shall maintain a list of the specific equipment currently being utilized with the generic plant. Any arrangement of the generic plant’s equipment must be such that the core equipment is not bypassed in the process flow.

4. Equipment Identification Requirement
APAC - Missouri, Inc. 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.

5. Record Keeping Requirement
APAC - Missouri, Inc. 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.

6. Reporting Requirement
APAC - Missouri, Inc. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.
SITE SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority.”

1. Superseding Condition
   The conditions of this permit supersede all special conditions found in the previously issued construction permits 022005-002 and 112004-006 from the Air Pollution Control Program.

2. Best Management Practices Requirement
   APAC - Missouri, Inc. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.

3. Ambient Air Impact Limitation
   A. APAC - Missouri, Inc. 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 $\mu$g/m$^3$ 24-hour average in ambient air.
   B. APAC - Missouri, Inc. shall demonstrate compliance with special condition 3.A using Attachment A and B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form. APAC - Missouri, Inc. shall account for the impacts from other sources of $PM_{10}$ as instructed in Attachment A and B.

4. Annual Emission Limit
   A. APAC - Missouri, Inc. shall emit less than 15.0 tons of $PM_{10}$ in any 12-month period from the entire installation.
   B. APAC - Missouri, Inc. shall demonstrate compliance with special condition 4.A using Attachment C or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

5. Wet Suppression Control System Requirement
   A. APAC - Missouri, Inc. shall install and operate wet spray devices on the following units.
      1.) All crushers
      2.) All Screens
      3.) All conveyors/stackers drop points that are not controlled by carryover control from wet controlled crushers and screens. Drop points that are two or more units after a wet-controlled crusher or screen within the process sequence are not controlled by carryover.
SITE SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, APAC - Missouri, Inc. shall adjust the production rate to control emissions from these units. APAC - Missouri, Inc. shall record a brief description of such events.

6. Diesel Engine/Generator Operational Requirements
The diesel engine/generator shall only be used to power the primary crusher during production.

7. Minimum Distance to Property Boundary Requirement
The primary emission point shall be located at least 500 feet from the nearest property boundary.

8. Record Keeping Requirement
APAC - Missouri, Inc. shall maintain all records required by this permit for five years and make them available to any Missouri Department of Natural Resources personnel upon request.

9. Reporting Requirement
APAC - Missouri, Inc. shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.
APAC - Missouri, Inc.  Complete: January 25, 2010
405 Highway J
Wright City, MO 63390

Parent Company:
APAC - Missouri, Inc.
PO Box 23910
Overland Park, KS 66283

Warren County, S10, T47N, R1W

PROJECT DESCRIPTION

APAC – Missouri, Inc. purchased the stationary rock-crushing plant from Lafarge North America and would like to replace the primary crusher and add a diesel engine to power the new primary crusher. The new primary crusher is rated at 550 tons per hour while the original primary crusher is rated at 500 tons per hour. Therefore, the replacement will debottleneck the plant. The new primary crusher will be taken from APAC – Missouri, Inc.’s portable plant PORT-0605. It is currently the company’s intent to keep the primary crusher at the stationary rock-crushing plant (219-0042). If the company ever decides to move the primary crusher back to PORT-0605, a new permit review may be required. The company would also like to add twenty-seven (27) conveyors to the generic capacity of the plant. All equipment except the primary crusher will be powered through electrical power.

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 Warren 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.

When APAC – Missouri, Inc. purchased the plant, the company asked that the basic operating permit issued under Lafarge North America (Project No. 2008-06-062) be terminated. With the issuance of this permit, APAC – Missouri, Inc. shall apply for a new Basic Operation Permit within thirty days of equipment startup. This facility is considered a minor source for construction permits.
The following permits have been issued to the stationary rock-crushing plant.

**Table 1: Permit History**

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>112004-006</td>
<td>Installation of a new generic plant.</td>
</tr>
<tr>
<td>022005-002</td>
<td>Addition of five (5) conveyors to the generic capacity of the plant.</td>
</tr>
</tbody>
</table>

The table below summarizes the emissions of this project. The potential emission of process equipment excludes emissions from haul roads and wind erosion, which are site specific and should not vary from site to site. The existing actual emissions were taken from the previous year’s EIQ. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). This conditioned potential emission is based on a voluntary limit of 15.0 tons per year of PM\(_{10}\) to avoid increment modeling.

**Table 2: 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(_{10})</td>
<td>15.0</td>
<td>17.33</td>
<td>10.34</td>
<td>100.55</td>
<td>&lt;15.00</td>
</tr>
<tr>
<td>SO(_x)</td>
<td>40.0</td>
<td>20.58</td>
<td>N/A</td>
<td>20.58</td>
<td>2.65</td>
</tr>
<tr>
<td>NO(_x)</td>
<td>40.0</td>
<td>163.02</td>
<td>N/A</td>
<td>163.02</td>
<td>21.01</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>4.17</td>
<td>N/A</td>
<td>4.17</td>
<td>0.54</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>43.30</td>
<td>N/A</td>
<td>43.30</td>
<td>5.58</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>25.0</td>
<td>0.08</td>
<td>N/A</td>
<td>0.08</td>
<td>0.04</td>
</tr>
</tbody>
</table>

N/A = Not Applicable

\(^1\)Emissions from the equipment only and does not include site specific haul road and storage pile emissions.

\(^2\)Includes site specific haul road and storage pile emissions.

**Table 3: Ambient Air Quality Impact Analysis**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>(^1)NAAQS/ RAL (µg/m(^3))</th>
<th>Averaging Time</th>
<th>(^2)Maximum Modeled Impact (µg/m(^3))</th>
<th>Limited Impact (µg/m(^3))</th>
<th>Background (µg/m(^3))</th>
<th>(^3)Daily Limit (tons/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM(_{10})</td>
<td>150.0</td>
<td>24-hour</td>
<td>293.24</td>
<td>130.00</td>
<td>20.0</td>
<td>7,379</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>150.0</td>
<td>24-hour</td>
<td>293.24</td>
<td>70.00</td>
<td>80.00</td>
<td>5,327</td>
</tr>
</tbody>
</table>

\(^1\)National Ambient Air Quality Standards (NAAQS) and Risk Assessment Level (RAL)

\(^2\)Modeled impact at maximum capacity with controls

\(^3\)Indirect limit based on compliance with NAAQS.

\(^4\)Solitary operation or operation with other plants that are owned by APAC - Missouri, Inc.

\(^5\)Operation with other plants that are not owned by APAC - Missouri, Inc.
EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States Environmental Protection Agency (EPA) document AP-42 Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment were calculated using emission factors from AP-42 Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004. The controlled emission factors were used because the equipment is controlled by water spray devices. Emissions from the diesel engines/generators were calculated using emission factors from AP-42 Section 3.4 “Large Stationary Diesel and All Stationary Dual-fuel Engines,” October 1996. 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 is applied to the emission calculations for the use of BMPs. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. The moisture content of the aggregate is 0.7% 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 PM$_{10}$. The Air Pollution Control Program requires an AAQIA of PM$_{10}$ for all asphalt, concrete and rock-crushing plants regardless of the level of PM$_{10}$ emissions if a permit is required. The AAQIA was performed using the Air Pollution Control Program’s generic nomographs. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the National Ambient Air Quality Standard (NAAQS) or Risk Assessment Level (RAL) for the pollutant. The distance from the plant to the nearest property boundary is 500 feet. When the plant operates continuously, the modeled concentration of PM$_{10}$ is greater than the NAAQS, so the plant’s production was limited to ensure compliance with the NAAQS.

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 µg/m$^3$ of 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 APAC - Missouri, Inc. shall demonstrate compliance with the NAAQS.

- When plants that are owned by APAC - Missouri, Inc. are located at the site, APAC - Missouri, Inc. must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS.

- When plants that are not owned by APAC - Missouri, Inc. are located at the site, APAC - Missouri, Inc. must account for the impacts of these plants as a background concentration and add it to the total impact of all plants owned by APAC - Missouri, Inc. that are operating at the site. This total is limited below the NAAQS. APAC - Missouri, Inc. shall limit the total impact of all plants they own and operate at the site to 70.0 µg/m$^3$ when any plants they do not own are located at the site.
APAC - Missouri, Inc. is not permitted to operate with any plant that is not owned by APAC - Missouri, Inc. that has a separate owner limited impact greater than 60.0 µg/m³.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants are conditioned below their respective de minimis levels.

APPLICABLE REQUIREMENTS

APAC - Missouri, 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- **Submission of Emission Data, Emission Fees and Process Information**, 10 CSR 10-6.110. The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.

- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.

- **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

SPECIFIC REQUIREMENTS


• None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) apply to the proposed equipment.

• *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

**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.

_______________________________  _______________________________
Chia-Wei Young Date
Environmental Engineer

**PERMIT DOCUMENTS**

The following documents are incorporated by reference into this permit:

• The Application for Authority to Construct form, dated January 25, 2010, received February 5, 2010, designating APAC - Missouri, Inc. as the owner and operator of the installation.


• St. Louis Regional Office Site Survey, Dated March 5, 2010.
### Attachment A: Ambient Impact Tracking Sheet
#### For Same Owner Operations
**APAC - Missouri, Inc. 219-0042**  
**Project Number:** 2010-02-086

This sheet covers the period from ________________ to ________________ (Copy as needed)

<table>
<thead>
<tr>
<th>Date</th>
<th>APAC - Missouri, Inc. 219-0042</th>
<th>Same Owner Plant</th>
<th>Same Owner Plant</th>
<th>Same Owner Plant</th>
<th>Background</th>
<th>Total Impact3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daily Production (tons)</td>
<td>Impact Factor (µg/m³/ton)</td>
<td>Impact1 (µg/m³)</td>
<td>Impact2 (µg/m³)</td>
<td>Impact2 (µg/m³)</td>
<td>Impact (µg/m³)</td>
</tr>
<tr>
<td>Example</td>
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<td>N/A</td>
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<tr>
<td></td>
<td>0.01762</td>
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<td>20.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Calculate the impact for 219-0042 by multiplying the daily production by the impact factor.
2Input the impact for any plants owned by APAC - Missouri, Inc. that are operating on the site.
3Calculate the total impact by adding the applicable impacts and background. A total of **150.0 µg/m³** or less is necessary for compliance.
### Attachment B: Ambient Impact Tracking Sheet
For Separate Owner Operations
APAC - Missouri, Inc. 219-0042
Project Number: 2010-02-086

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

---

<table>
<thead>
<tr>
<th>Date</th>
<th>APAC - Missouri, Inc. 219-0042</th>
<th>Same Owner Plant</th>
<th>Separate Owner Plant</th>
<th>Total Impact</th>
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<tr>
<td></td>
<td>Daily Production (tons)</td>
<td>Plant Name:</td>
<td>Plant Name:</td>
<td>Plant Name:</td>
</tr>
<tr>
<td></td>
<td>Impact Factor (µg/ton²ton)</td>
<td>Plant ID:</td>
<td>Plant ID:</td>
<td>Plant ID:</td>
</tr>
<tr>
<td></td>
<td>Impact¹ (µg/m³)</td>
<td>Permit #:</td>
<td>Impact² (µg/m³)</td>
<td>Background (µg/m³)</td>
</tr>
<tr>
<td></td>
<td>Impact² (µg/m³)</td>
<td>Impact (µg/m³)</td>
<td>Total Impact³ (µg/m³)</td>
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</tr>
<tr>
<td>Example</td>
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<td>0.01762</td>
<td>60.00</td>
<td>20.0</td>
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</tr>
</tbody>
</table>

¹ Calculate the impact for 219-0042 by multiplying the daily production by the impact factor.
² Input the impact for any plants owned by APAC - Missouri, Inc. that are operating on the site.
³ Calculate the total impact by adding the applicable impacts and background. Include the separate owner plant impact. A total of 150.0 µg/m³ or less is necessary for compliance.
**Attachment C: PM$_{10}$ Annual Emissions Tracking Sheet**

APAC - Missouri, Inc. 219-0042  
Project Number: 2010-02-086  
Permit Number:

Site Name: Wright City Quarry  
Site Address: 405 Highway J, Wright City, MO 63390  
Site County: Warren County, S10, T47N, R1W

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>Production Monthly Emissions$^1$ (tons)</th>
<th>Background Emissions$^2$ (tons)</th>
<th>Total Monthly Emissions$^3$ (tons)</th>
<th>12-Month Total Emissions$^4$ (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>10,000</td>
<td>0.04174</td>
<td>0.209</td>
<td>0.195</td>
<td>0.209</td>
<td>0.404</td>
</tr>
<tr>
<td>Example</td>
<td>7,000</td>
<td>0.04174</td>
<td>0.146</td>
<td>0.195</td>
<td>0.341</td>
<td>0.745</td>
</tr>
</tbody>
</table>

1Multiply the monthly production (tons) by the emission factor (lbs/ton) and divide by 2,000.  
2Background emissions from the wind erosion of the storage piles.  
3Add the production monthly emissions (tons) to the background emissions (tons).  
4Add the total monthly emissions (tons) of the current month to the sum of the monthly emissions of the previous eleven months. A total of less than **15.0 tons** 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 portable plant is operating.

1. Pavement
   A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive 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 operator shall also record the rational for not watering (e.g. freezing conditions or not operating).
   E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources personnel upon request.

¹For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)
## Attachment BB: Emission Calculations
### APAC - Missouri, Inc.
#### 2010-02-086

<table>
<thead>
<tr>
<th>Description</th>
<th>(^1)MHDR</th>
<th>(^2)PM(_{10}) EF</th>
<th>EF Units</th>
<th>Control Eff. %</th>
<th>Emissions (lb/hr)</th>
<th>(^3)Modeling Rate (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling</td>
<td>550</td>
<td>0.000</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Blasting</td>
<td>550</td>
<td>0.000</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Loading Truck in Pit</td>
<td>550</td>
<td>0.000016</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.0088</td>
<td>0.0049</td>
</tr>
<tr>
<td>Unloading Truck at Crusher</td>
<td>550</td>
<td>0.000016</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.0088</td>
<td>0.0049</td>
</tr>
<tr>
<td>Generic Feeder (1)</td>
<td>625</td>
<td>0.000016</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>0.0100</td>
<td>0.00559</td>
</tr>
<tr>
<td>Generic Primary Crushing (1)</td>
<td>550</td>
<td>0.0024</td>
<td>Lbs/ton</td>
<td>75.00</td>
<td>0.3300</td>
<td>0.184</td>
</tr>
<tr>
<td>Generic Secondary Crushing (1)</td>
<td>550</td>
<td>0.0024</td>
<td>Lbs/ton</td>
<td>75.00</td>
<td>0.3300</td>
<td>0.184</td>
</tr>
<tr>
<td>Generic Screening (3)</td>
<td>1,800</td>
<td>0.0087</td>
<td>Lbs/ton</td>
<td>91.50</td>
<td>1.3311</td>
<td>0.744</td>
</tr>
<tr>
<td>Generic Conveying and Stacking (50)</td>
<td>27,500</td>
<td>0.0011</td>
<td>Lbs/ton</td>
<td>95.80</td>
<td>1.2705</td>
<td>0.7102</td>
</tr>
<tr>
<td>Storage Pile Load In</td>
<td>550</td>
<td>0.011991</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>6.5951</td>
<td>3.687</td>
</tr>
<tr>
<td>Storage Pile Wind Erosion</td>
<td>6</td>
<td>0.089166</td>
<td>Lbs/acre.hr</td>
<td>0.00</td>
<td>0.5350</td>
<td>0.299</td>
</tr>
<tr>
<td>Storage Pile Vehicular Activity</td>
<td>550</td>
<td>0.0038</td>
<td>Lbs/ton</td>
<td>90.00</td>
<td>0.2090</td>
<td>0.1168</td>
</tr>
<tr>
<td>Storage Pile Load Out</td>
<td>550</td>
<td>0.011991</td>
<td>Lbs/ton</td>
<td>0.00</td>
<td>6.5951</td>
<td>3.687</td>
</tr>
<tr>
<td>Raw Material Hauling</td>
<td>2.1611</td>
<td>2.16112</td>
<td>Lbs/VMT</td>
<td>90.00</td>
<td>2.1386</td>
<td>1.195</td>
</tr>
<tr>
<td>Sales Haul Road</td>
<td>2.5556</td>
<td>2.55569</td>
<td>Lbs/VMT</td>
<td>90.00</td>
<td>2.9284</td>
<td>1.4286</td>
</tr>
<tr>
<td>Diesel Engine (1)</td>
<td>0.0849</td>
<td>7.85</td>
<td>Lbs/Mgal</td>
<td>0.00</td>
<td>0.6665</td>
<td>0.3726</td>
</tr>
</tbody>
</table>

\(^1\)Maximum Hourly Design Rate (MHDR)
\(^2\)Emission Factor (EF)
\(^3\)The Modeling Rate is the emission rate scaled to the daily hours of operation at MHDR allow by the permit.
Ms. Adrienne Coppock
Environmental Manager
APAC - Missouri, Inc.
P.O. Box 23910
Overland Park, KS 66283

RE: New Source Review Permit - Project Number: 2010-02-086

Dear Ms. Coppock:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your 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.

If you have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, at the Departments’ 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

Kendall B. Hale
New Source Review Unit Chief

KBH:cwyl

Enclosures

c:  St. Louis Regional Office
    PAMS File: 2010-02-086

    Permit Number: