



DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION
PERMIT TO CONSTRUCT

Permit Number: 022009-008 Project Number: 2008-11-001
Parent Company: Gabel Stone Co., Inc.
Parent Company Address: 2092 County Road 5900, Willow Springs, MO 65793
Installation Name: Gabel Stone Co. PORT-0627
Installation Address: 2092 County Road 5900, Willow Springs, MO 65793
Location Information: County, S23, T27N, R10W

Application for Authority to Construct was made for:
The installation of a new portable rock crushing plant. Rock is processed through 1 crusher(s), 1 screen(s), and 4 conveyor(s). The portable rock crushing plant has a maximum hourly design rate (MHDR) of 300 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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

FEB 17 2009

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James K. Kavanagh".
DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the 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 RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances. The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, Attention: Construction Permit Unit.

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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); 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. **Portable Equipment Identification Requirement**
To assure that each component is properly identified as being a part of this portable rock crushing plant, Gabel Stone Co. PORT-0627 shall provide and maintain suitable, easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable rock crushing plant.
2. **Relocation of Portable Rock Crushing Plant**
 - A. The portable rock crushing plant shall not be operated at any site location longer than 24 consecutive months without an intervening relocation.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
 - 1.) If the portable rock crushing plant is moving to a site previously permitted, and if there are no other new plants at the site, then the application must be received by the Air Pollution Control Program at least seven (7) days prior to the relocation.
 - 2.) If the portable rock crushing plant is moving to a new site, or if there are other plants or equipment at the site that have not been evaluated for concurrent operation, then the application must be received by the Air Pollution Control Program at least twenty-one (21) days prior to the relocation. The application must include written notification of any concurrently operating plants.
3. **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.
4. **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

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SITE-SPECIFIC SPECIAL CONDITIONS:

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

Site ID No.: 091-0062
Site Name: Willow Springs Quarry
Site Address: 2092 County Road 5900, Willow Springs, MO 65793
Site County: Howell County, S23, T27N, R10W

1. **Best Management Practices**
Gabel Stone Co. PORT-0627 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 (PM₁₀)**
 - A. The operator(s) for Gabel Stone Co. PORT-0627's portable rock crushing plant (PORT-0627) shall ensure, while operating at this site, that the ambient impact of PM₁₀ at or beyond the nearest property boundary does not exceed 150 µg/m³ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
 - B. The portable rock-crushing plant, PORT-0627, is permitted to operate under two (2) scenarios: concurrent (same owner) and concurrent (same **and** separate owner) operations. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the portable rock-crushing plant and any ambient background concentration from installations or equipment located on the same site as the portable rock-crushing plant.
 - C. 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 PM₁₀ 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 PM₁₀ 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 Nitrogen Oxides (NO_x)**
 - A. The operator(s) shall ensure that Gabel Stone Co. PORT-0627's portable rock crushing plant emits less than 40.0 tons of NO_x into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and NO_x. Attachment C, *Monthly Nitrogen Oxides (NO_x) Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose
4. **Moisture Content Testing Requirement for Inherent Moisture Content**
 - A. The inherent moisture content of the rock will reduce particulate emissions. Gabel Stone Company, Inc. claimed the inherent moisture content of the processed rock to be greater than or equal to 1.5 wt.%, which shall be verified by testing.
 - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director. The first test shall be no later than 45 days after startup. Testing shall be conducted at least once every two years after the initial test, during the months of June through September, while the portable rock-crushing plant is active at this site.
 - C. Test samples shall be obtained before processing (before entering the primary Jaw crusher EP05) and after processing (prior to load-in to bins and/or storage piles). During the sample processing run only, any spray devices shall be turned off during the processing from which test samples are obtained. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. Within 30 days of completion of the required tests, the report shall be filed on-site or at the Gabel Stone Company, Inc. main office.

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SITE-SPECIFIC SPECIAL CONDITIONS:

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

- D. If the inherent moisture content result of the first test is less than 1.5 wt.%, a second test must be performed within 30 days. If the result of the second test is less than 1.5 wt.%, Gabel Stone Company, Inc. shall apply for a new construction permit to account for the revised information or install wet spray devices on the affected units.
5. Performance Testing for New Source Performance Standards (NSPS)
- A. Gabel Stone Co. PORT-0627 shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart "OOO". Gabel Stone Co. PORT-0627 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.
6. 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). Gabel Stone Co. PORT-0627 has designated the following unit(s) as the primary emission point(s) of the portable rock crushing plant: primary jaw crusher (EP05). Bypassing the primary emission point(s) for processing is prohibited.
7. Restriction on Minimum Distance to Nearest Property Boundary
- The primary emission point of the portable rock crushing plant, which is the primary jaw crusher (EP05), shall be located at least 550 feet from the nearest property boundary whenever it is operating at this site.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Rock, composed of non-metallic minerals, is drilled/blasted, loaded into haul trucks, and transported to processing. Rock is processed through feeder(s), crusher(s), screen(s), conveyor(s), and bin(s). Processing equipment is powered with one (1) diesel engine(s). The emission points are listed in the attached spreadsheet summary. This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is located in Howell County, an attainment area for all criteria air pollutants.

The installation voluntarily requested 40 tons per year limit for NO_x in order to be below *de minimis* level in order to avoid dispersion modeling and increment analysis.

The rock-screening plant is permitted to operate under two (2) scenarios.

- Concurrent (Same Owner) Operations: Operations when other asphalt, concrete, rock-crushing, or rock-screening plants owned by Gabel Stone Co., 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.

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutants of concern for this project are PM₁₀ and NO_x. 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 PM₁₀ conditioned potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

The portable rock crushing plant has an annual emission limit of less than 40 tons of NO_x in any 12-month period. A composite NO_x emission factor was developed for the portable rock crushing plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment C. If the conditioned potential emissions of NO_x were 40 tons per year or greater, then the owner would be required to submit dispersion modeling results.

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	**New Installation Conditioned Potential	Emission Factor (lb/ton)
PM ₁₀	15.0	N/A	N/A	59.42	42.54	N/A
SO _x	40.0	N/A	N/A	3.69	2.63	N/A
NO _x	40.0	N/A	N/A	56.15	39.99	0.0427
VOC	40.0	N/A	N/A	4.58	3.26	N/A
CO	100.0	N/A	N/A	12.10	8.61	N/A
HAPs	10.0/25.0	N/A	N/A	0.05	0.04	N/A

Note: N/A = Not Applicable

** Conditioned potential based on voluntary limit. Other pollutants proportionately reduced.

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 550 feet to the nearest property boundary. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary in any single 24-hour period. 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 $\mu\text{g}/\text{m}^3$ of PM_{10} . To ensure conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary.

The screening tools were used to develop an ambient impact factor for the portable rock-screening plant. This ambient impact factor shall be used in keeping track of the daily PM_{10} ambient impact of the plant during concurrent (same owner) and concurrent (separate **and** same owner) operations to ensure compliance with NAAQS and is incorporated into the daily record keeping tables, Attachment A and B

- Concurrent (Same Owner) Operations: The ambient impact from the stationary rock-crushing/cold mix asphalt installation is included as a set value of 52.47 $\mu\text{g}/\text{m}^3$. Background level of 20.00 $\mu\text{g}/\text{m}^3$ is reserved for the use of Best Management Practices. The remaining balance of 77.53 $\mu\text{g}/\text{m}^3$ can be used by PORT-0627 and other asphalt, concrete rock-crushing or rock-screening plants owned by Gabel Stone Co. The portable rock-crushing plant, PORT-0627, must track not only its own daily PM_{10} ambient impact, but also that of all other asphalt, concrete, rock-crushing, or rock-screening plants owned by Gabel Stone Co., Inc. (except for the stationary installation, 091-0062) to ensure that the total daily PM_{10} ambient impact from these plants does not exceed 77.53 $\mu\text{g}/\text{m}^3$
- Concurrent (Separate and Same Owner) Operations: The ambient impact from the stationary rock-crushing/cold mix asphalt installation is included as a set value of 52.47 $\mu\text{g}/\text{m}^3$. Background level of 20.00 $\mu\text{g}/\text{m}^3$ is reserved for the use of Best Management Practices and 26.46 $\mu\text{g}/\text{m}^3$ can be used by other asphalt, concrete, rock-crushing, or rock-screening plants owned by other companies. The remaining balance of 51.07 $\mu\text{g}/\text{m}^3$ can be used by PORT-0627 and other asphalt, concrete rock-crushing, or rock-screening plants owned by Gabel Stone Co.. The portable rock-crushing plant, PORT-0627, must track not only its own daily PM_{10} ambient impact, but also that of all other asphalt, concrete, rock-crushing, or rock-screening plants owned by Gabel Stone Co., Inc.(except for the stationary installation, 091-0062) to ensure that the total daily PM_{10} ambient impact from these plants does not exceed 51.07 $\mu\text{g}/\text{m}^3$.

Table 3: Ambient Air Quality Impact Analysis of PM_{10} , 24-Hour Averaging Time

Operation	Ambient Impact Factor ($\mu\text{g}/\text{m}^3/\text{ton}$)	Modeled Impact ($\mu\text{g}/\text{m}^3$)	Ambient Impact from Stationary Installation ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)	Daily Production Limit (tons)
• Concurrent, Same Owner	0.0108	*	52.47	¹ 20.00	150.00	*
• Concurrent, Separate Owners	0.0106	*	52.47	² 46.46	150.00	*

Note 1: Background of 20.00 $\mu\text{g}/\text{m}^3$ from haul roads and storage piles.

Note 2: Background of 20.00 $\mu\text{g}/\text{m}^3$ from haul roads and storage piles and 26.46 $\mu\text{g}/\text{m}^3$ from the operations of other asphalt, concrete, rock-crushing, or rock-screening plants owned by other companies.

* The operator(s) must balance production among concurrently operating plants, with the ambient impact factors for each, such that NAAQS is not exceeded. Ambient impact from other plants owned by Gable Stone Co. can be obtained from the operators of these plants.

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 portable 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
- 40 CFR Part 60 Subpart "OOO", *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS)
- 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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Samer Al-Shoukhi
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Gabel Stone Co., Inc. 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*.
- Noyes Data Corp. book, Orlemann, et al.1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southwest Regional Office Site Survey.
- Best Management Practices

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 Emissions¹” 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.

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.