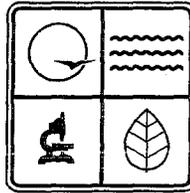


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **11 2007 - 003** Project Number: **2007-08-082**
Owner: **Delta Companies, Inc.** **207-0012**
Owner's Address: **P. O. Box 880, Cape Girardeau, MO 63702**
Installation Name: **Brown Sand & Gravel**
Installation Address: **Highway 25 N, Dexter, MO 63841**
Location Information: **Stoddard County, S1, T25N, R10E**

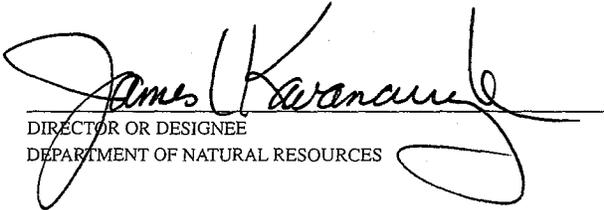
Application for Authority to Construct was made for:

The modification of an existing rock-washing plant to add Best Management Practices for the control of fugitive emissions from haul roads and storage piles and to allow for concurrent operations. The rock-washing plant has a maximum hourly design rate (MHDR) of 300 tons per hour (tph). 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 (listed as attachments starting on page 2) are applicable to this permit.

NOV - 6 2007

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 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. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the 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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, 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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

Page No.	2
Permit No.	
Project No.	2007-08-082

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**
Brown Sand & Gravel 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 Brown Sand & Gravel's stationary rock-washing plant (207-0012) 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 plant is permitted to operate under four (4) scenarios: Solitary, concurrent (same owner), concurrent (separate owners), and concurrent (same **and** separate owners) operations. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the rock-washing plant and any ambient background concentration from installations or equipment located on the same site as the rock-washing plant.
 - C. To demonstrate compliance during each operating scenario, the operator(s) shall maintain a daily record of material processed and the resulting daily PM₁₀ ambient impact. Attachment A-1, or other equivalent form(s), shall be used for this purpose during solitary and concurrent (same owner) operations. Attachment A-2, or other equivalent form(s), shall be used for this purpose during concurrent (separate owners) and concurrent (same **and** separate owners) operations.
3. **Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. The operator(s) shall ensure that Brown Sand & Gravel's rock-washing plant emits less than 15 tons of PM₁₀ into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM₁₀. Attachment A, *Monthly PM₁₀ Emissions Tracking Record*, or other equivalent form(s), shall be used for this purpose.
4. **Restriction on the Use of Diesel Engine(s)**
The installation is not permitted to operate diesel engine(s). If the company decides that it would need diesel engine(s), a new permit review will be required.
5. **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 immediately to any Missouri Department of Natural Resources' personnel upon request.
6. **Reporting Requirement**
The operator(s) shall report to the Air Pollution Control Program (APCP) 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.
7. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit(s) (0799-009, 072000-002) from the Air Pollution Control Program.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

INSTALLATION/PROJECT DESCRIPTION

The installation is a rock-washing plant consisting of screens, conveyors, and stackers. The water will be applied at various points in the process to keep the process saturated with water. The installation is not permitted to operate diesel engines. If the company decides, in the future, that it would need diesel engines, a new permit review will be required. The following permits have been issued to the plant.

Table 1. Other Permits Issued for Site 207-0012

Permit Number	Completed	Description
0799-009	7/15/1999	Installation of rock-washing plant
071000-002	7/6/2000	Addition of screen and stacker.

In July, 2004, the Air Pollution Control Program received notice from the installation that it would like to install a crusher, a screen, and four (4) conveyors, each with a maximum hourly design rate (MHDR) of 100 tons per hour (tph), to the wash plant. At that time, it was determined that the additions would not require a permit because the PM₁₀ emissions expected from the new equipment were below the exemption levels. These equipment are not taken into account for this permit because the equipment are no longer in use.

This permit is being issued to allow the rock-washing plant to use Best Management Practices for the control of fugitive emissions from haul roads and storage piles, and to allow the rock-washing plant to operate concurrently at the site with other plants.

The stationary plant is permitted to operate under four (4) scenarios.

- Solitary Operations: Operations when the plant is at the site by itself.
- Concurrent (Same Owner) Operations: Operations when other plants owned by Delta Companies, Inc. are located at the site at the same time.
- Concurrent (Separate Owner) Operations: Operations when other plants owned by other companies are located at the site at the same time.
- Concurrent (Same **and** Separate Owner) Operations: Operations when other plants owned by the Delta Companies, Inc. **and** other plants owned by other companies are located at the site.

Delta Companies, Inc. is the owner of Brown Sand & Gravel. If there are other plants owned by Delta Companies, Inc. operating under a different name at the site, it shall be considered same owner operations.

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". In order to avoid increment analysis, the installation has agreed to hold its PM₁₀ emissions under the *de minimis* level of 15.0 tons per year.

The rock processed at and after the primary screen are expected to be saturated with water. The PM₁₀ emissions from these sources were considered to be zero (0) for the emissions evaluation. PM₁₀ emissions from equipment upstream of the primary screens, which includes a scalping screen and two (2) conveyors/stackers, were calculated using uncontrolled emission factors.

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory <i>De Minimis</i> Levels	*Existing Potential Emissions	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Installation	**New Installation Conditioned Potential	Emission Factor (lb/ton)
PM ₁₀	15.0	26.80	5.33	69.89	<15.00	0.05319
SO _x	40.0	N/A	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A	N/A

Note: N/A = Not Applicable

* Existing potential emissions taken from permit #072000-002

** Conditioned potential based on limit in permit conditions.

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 700 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. 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 rock processed at and after the primary screen is saturated with water and no ambient impact is expected from these equipment. The ambient impact is from the scalping screen and the two (2) conveyors/stackers before the primary crusher.

During the four (4) operating scenarios, the following record keeping procedures shall be used to ensure compliance with NAAQS.

- Solitary Operations: The rock-washing plant shall record its daily PM₁₀ ambient impact to ensure that it does not exceed 130 µg/m³. Attachment A-1, or equivalent forms, shall be used for this purpose.
- Concurrent (Same Owner) Operations: All plants at this site should have a combined daily PM₁₀ ambient impact of less than 130 µg/m³. The rock-washing plant shall track its own daily PM₁₀ ambient impact **and** the ambient impact of other plants at this site to ensure compliance with this limit. Attachment A-1, or equivalent forms, shall be used for this purpose.
- Concurrent (Separate Owners) Operations: The rock-washing plant is permitted for 80.00 µg/m³ of daily PM₁₀ ambient impact while plants owned by other companies are allowed 50 µg/m³. The rock-washing plant shall track its own daily PM₁₀ ambient impact to ensure the limit of 80.00 µg/m³ is not exceeded. Attachment A-2, or equivalent forms, shall be used for this purpose.
- Concurrent (Same **and** Separate Owners) Operations: The plants owned by Delta Companies, Inc. are permitted for 80.00 µg/m³ of daily PM₁₀ ambient impact while plants owned by other companies are permitted for 50.00 µg/m³ of daily PM₁₀ ambient impact. The rock-washing plant shall keep track of its own daily PM₁₀ ambient impact and the daily PM₁₀ ambient impact of other plants owned by Delta Companies, Inc. to ensure that the limit of 80.00 µg/m³ is not exceeded. Attachment A-2, or equivalent forms, shall be used for this purpose.

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

Operation	Ambient Impact Factor (µg/m ³ ton)	Modeled Impact (µg/m ³)	*Background (µg/m ³)	NAAQS (µg/m ³)	Daily Production Limit (tons)
1. Solitary	0.02155	130.00	20.00	150.00	6,031
2. Concurrent (Same Owner)	0.02155	**	20.00	150.00	**
3. Concurrent (Same Owners)	0.01910	80.00	70.00	150.00	4,188
4. Concurrent (Same and Separate Owners)	0.01910	**	70.00	150.00	**

* Background PM₁₀ level of 20.00 µg/m³ from haul roads and stockpiles and 50.00 µg/m³ from the operation of plants owned by other companies.

** The operator(s) must balance production among concurrently operating plants such that NAAQS is not exceeded. Ambient impacts of other plants owned by Delta Companies, Inc. 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 installation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- 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.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Delta Companies, 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.
- Southeast 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.

Mr. Jerry Neels
Safety/Environmental Manager
Delta Companies, Inc.
P. O. Box 880
Cape Girardeau, MO 63702

RE: New Source Review Permit - Project Number: 2007-08-082

+Dear Mr. Neels:

Enclosed with this letter is your New Source Review permit. Please review your permit carefully and note the special conditions, if any, and the requirements in your permit.

Operation in accordance with the conditions and requirements in your permit and the New Source Review application submitted for project 2007-08-082 is necessary for continued compliance. The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from the main portion of your permit. The entire permit must be retained in your files. 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 the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102 or (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendal B. Hale, P.E.
New Source Review Unit Chief

KBH:cwyl

Enclosures

c: Southeast Regional Office
PAMS File: 2007-08-082
Permit Number: