

STATE OF MISSOURI

PERMIT BOOK



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

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

Permit Number: 042011-004

Project Number: 2011-01-014
Installation ID: 023-0021

Parent Company: Delta Companies, Inc.

Parent Company Address: P.O. Box 880, Cape Girardeau, MO 63702

Installation Name: Delta Asphalt Inc.

Installation Address: 12248 Highway 67 North, Poplar Bluff, MO 63902

Location Information: Butler County, S14, T26N, R5E

Application for Authority to Construct was made for:

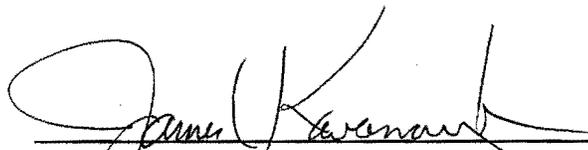
The installation of a new mixing drum, three conveyors and a RAP screen. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

APR 20 2011

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. 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 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.

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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 Special Condition 2, Special Condition 6, and Special Condition 9, found in Construction Permit 032004-017A, and Construction Permit 032004-16A (issued as Project 2009-02-091) from the Air Pollution Control Program.
2. **Best Management Practices (BMPs) Requirement**
Delta Asphalt Inc. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
3. **Ambient Air Impact Limitation**
 - A. Delta Asphalt Inc. shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM₁₀) of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Delta Asphalt Inc. shall demonstrate compliance with Special Condition 3.A, using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
4. **Annual Emission Limit**
 - A. Delta Asphalt Inc. shall emit less than 15.0 tons of PM₁₀ in any 12-month period from all equipment of this asphalt plant.
 - B. Delta Asphalt Inc. shall demonstrate compliance with Special Condition 4.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
5. **Moisture Content Testing Requirement**
 - A. Delta Asphalt Inc. shall verify that the moisture content of the processed rock is greater than or equal to 1.5% weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.

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SPECIAL CONDITIONS:

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

- C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Delta Asphalt Inc. main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 5.A, another test may be performed within 15 days of the noncompliant test. If the results of that test also exceed the limit, Delta Asphalt Inc. shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Air Pollution Control Program Compliance Assistance section within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
 - G. In lieu of testing, Delta Asphalt Inc. may obtain test results that demonstrate compliance with the moisture content in Special Condition 5.A from the supplier of the aggregate.
6. Control Device Requirement-Baghouse
- A. Delta Asphalt Inc. shall control emissions from the drum dryer using baghouses as specified in the permit application.
 - B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

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SPECIAL CONDITIONS:

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

- D. Delta Asphalt Inc. shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

- E. Delta Asphalt Inc. shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

- 7. Minimum Distance to Property Boundary Requirement
The primary emission point (the drum dryer) shall be located at least 250 feet from the nearest property boundary.

- 8. Concurrent Operation Restriction
Delta Asphalt Inc. is prohibited from operating whenever plants not owned by Delta Companies, Inc., the parent company of Delta Asphalt Inc., are located at the site.

- 9. Fuel Sulfur Weight Percent Requirement
 - A. Delta Asphalt Inc. shall only burn fuel with a sulfur content less than 0.28% by weight in the drum dryer, burner and asphalt heater.

 - B. The use of fuel that exceeds 0.28% by weight in the in the drum dryer, burner and heater is prohibited.

 - C. Delta Asphalt Inc. shall obtain the sulfur content of the fuel for each delivery from the fuel vendors or by conducting their own fuel analysis. The fuel consumption records and statement shall be kept on-site for five (5) years and shall be made immediately available to the Missouri Department of Natural Resources' personnel upon request.

- 10. Record Keeping Requirement
Delta Asphalt Inc. shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

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SPECIAL CONDITIONS:

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

11. Reporting Requirement
Delta Asphalt 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.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2011-01-014
Installation ID Number: 023-0021
Permit Number:

Delta Asphalt Inc.
12248 Highway 67 North
Poplar Bluff, MO 63902

Complete: January 10, 2011

Parent Company:
Delta Companies, Inc.
P.O. Box 880
Cape Girardeau, MO 63702

Butler County, S14, T26N, R5E

PROJECT DESCRIPTION

Delta Asphalt Inc. will dismantle and remove its current pugmill mixer and replace it with a new mixing drum and install a Reclaimed Asphalt Pavement (RAP) screen with a conveyor, a bucket elevator conveyor and a dust screw conveyor. The pugmill mixer was the bottleneck of the original operation and limited the plant to produce 220 tons of asphalt per hour. The new mixing drum de-bottlenecks the plant and the drum dryer becomes the bottleneck and limits the plant to produce 350 tons of asphalt per hour. The drum dryer's parameters are listed in Table 4. The plant also uses a burner with an input capacity of 107 million British thermal units per hour (MMBTU/hr) and a heater with an input capacity of 2.2 MMBTU/hr. The drum dryer, burner and heater are all powered by waste oil #4 with a sulfur content up to 0.28% by weight. The other emission points of this operation are powered by electricity.

This asphalt plant was formerly owned by Pace Construction Co. Delta Asphalt Inc. also operates a rock-crushing plant and agricultural limestone plant concurrently at this site under the Installation ID Number 023-0003.

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 Butler County, an attainment area for all criteria pollutants. This installation is 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 counted toward major source applicability.

TABLES

The following permits have been issued to this asphalt plant from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0579-021	Installation of a new asphalt plant
032004-017A & 032004-016A	Change in tracking of emissions

The table below summarizes the emissions of this project. 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). The conditioned potential emissions are based on a voluntary limit of 15.0 tons per year to avoid refined modeling.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/ SMAL	¹ Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	² Potential Emissions of the Application	Conditioned Potential Emissions
PM ₁₀	15.0	1.42	3.42	61.55	< 15.00
PM _{2.5}	10.0	1.04	0.08	43.86	10.63
SO _x	40.0	2.74	1.98	72.46	18.42
NO _x	40.0	4.51	4.62	87.85	21.19
VOC	40.0	2.21	0.30	86.49	20.59
CO	100.0	14.70	14.66	203.23	38.98
³ Lead Compounds	0.01	0.001	N/A	0.02	0.005
³ Formaldehyde	2.0	0.12	N/A	5.01	1.20
Total HAPs	25.0	0.29	N/A	15.76	3.86

N/A = Not Applicable

¹ Existing Potential Emissions of existing equipment operating at 220 tons per hour were calculated during this project

² Includes site specific haul road and storage pile emissions

³ Screening Model Action Level (SMAL)

Table 3: Ambient Air Quality Impact Analysis

Pollutant	¹ NAAQS (µg/m ³)	Averaging Time	² Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	³ Daily Limit (tons/day)
⁴ PM ₁₀ (same)	150.0	24-hour	137.76	130.0	20.0	8,061

¹ National Ambient Air Quality Standards (NAAQS)

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 Delta Companies, Inc.

The plant's drum dryer emissions were modeled using the SCREEN3 screen modeling software. The stack characteristic entered into the modeled are listed in Table 3.

Table 4: SCREEN3 Input Parameters

Equipment Description	Stack Height (ft)	Stack Inside Diameter (ft)	Stack Gas Exit Velocity (ACFM)	Stack Gas Exit Temperature (F)	Dispersion Coefficient
Drum Dryer	43.5	3.6	50,000	325	Rural

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 drum mix asphalt plant were calculated using emission factors from AP-42 Section 11.1 "Hot Mix Asphalt Plants," April 2004. Sulfur oxide (SO_x) emissions were calculated using the SO₂ and SO₃ emission factors from AP-42 Section 1.3 "Fuel Oil Combustion," September 1998, and assuming half of the sulfur up to 0.1 pound per ton of product is absorbed into the product. The asphalt plant is controlled by a baghouse, so the fabric filter controlled emission factor was used to calculate PM₁₀ emissions. Emissions from plant load-out were calculated using predictive equations found in AP-42 Table 11.1-14. Default values were used for asphalt volatility and mix temperature. Emissions from the asphalt heater were calculated using emission factors from AP-42 Section 1.3 "Fuel Oil Combustion," May 2010. Emissions from aggregate handling were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5% weight.

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 1.5% 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 the pollutants listed in Table 3. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software SCREEN3. 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. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant's production is limited to ensure compliance with the standard.

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 $\mu\text{g}/\text{m}^3$ 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 scenario explains how Delta Asphalt Inc. shall demonstrate compliance with the NAAQS.

- Plants that are not owned by Delta Companies, Inc., the parent company of Delta Asphalt Inc., are referred to as separate owner plants and are not authorized to operate at the site. The asphalt plant of this permit (023-0021) will operate concurrently with other plants that are owned by Delta Companies, Inc., which are referred to as same owner plants. These same owner plants include a rock-crushing plant (023-0003), which is permitted under Construction Permit 032004-017A, and an agricultural lime plant (023-0003), which is permitted under Construction Permit 032004-016A. Delta Asphalt Inc. must calculate the daily impact of each plant and limit the total impact of all plants below the NAAQS.

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 PM_{10} are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Delta Asphalt 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 on April 1 for paper submittals or May 1 for MOEIS submittals for the previous year's emissions. Payment of emission fee is required by June 1.

- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- 40 CFR 60 Subpart I, "Standards of Performance for Hot Mix Asphalt Facilities" applies to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) 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.

 Daronn A. Williams
 Environmental Engineer

 Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 4, 2011, received January 10, 2011, designating Delta Companies, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated January 28, 2011.

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 emissions¹ while the plant is operating.
 - B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants
 - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources personnel upon request.

3. Application of Water-Documented Daily
 - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - C. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale 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.)

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

RE: New Source Review Permit - Project Number: 2011-01-014

Dear Mr. Neels:

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 amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:dwk

Enclosures

c: Southeast Regional Office
PAMS File: 2011-01-014

Permit Number: