

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.	2007-05-078

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. **Superseding Condition**
The conditions of this permit supersede general special conditions 2 and 3 found in the previously issued construction permit 042006-010 from the Air Pollution Control Program.
2. **Relocation of Portable Asphalt Plant**
 - A. The portable asphalt 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 asphalt plant.
 - 1.) If the portable asphalt 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 asphalt 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. **Annual Emission Limit of Carbon Monoxide (CO)**
 - A. PORT-0549 shall emit less than 100 tons of CO into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, PORT-0549 shall maintain a daily record of material processed and CO. Attachment A, *Monthly Carbon Monoxide (CO) Emissions Tracking Record*, or other equivalent forms, will be used for this purpose. PORT-0549 shall maintain these records for five (5) years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
 - C. PORT-0549 shall report to the Air Pollution Control Program Enforcement Section no later than ten (10) days after any exceedances of condition 2.A.
4. **Compression-Ignition Engine (CIE) Requirement**
PORT-0549 shall maintain documentation certifying the CIE that provides power to the asphalt plant complies with 40 CFR 89 Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines, Tier 2.

Page No.	3
Permit No.	
Project No.	2007-05-078

SITE-SPECIFIC SPECIAL CONDITIONS:

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

Site ID No.: 043-P024
Site Name: McCracken Quarry
Site Address: Route 1, Sparta, MO 65753
Site County: Christian County, S20, T27N, R20W

1. Superseding Condition
The conditions of this permit supersede site-specific special conditions 2 and 5 found in the previously issued construction permit 042006-010 from the Air Pollution Control Program.
2. Fuel Restriction
 - A. Leo Journagan Construction Company, Inc.-Portable Hot Mix Asphalt Plant (PORT-0549) shall fire fuel oil in the drum dryer (EP-1).
 - B. All fuel fired in the drum dryer shall have a maximum 1.0 percent sulfur by weight.
 - C. PORT-0549 shall demonstrate compliance with the limit in special condition 2.B through one of the following methods:
 1. PORT-0549 shall obtain and record the sulfur content of each shipment of fuel from the supplier.
 2. PORT-0549 shall determine and record the percent sulfur as specified by American Society of Testing and Materials Method D(2622-98), *Sulfur in Petroleum Products by X-Ray Fluorescence Spectrometry*.
 - D. PORT-0549 shall maintain the records in special condition 2.C for five (5) years and make them available to any Missouri Department of Natural Resources' personnel upon request.
3. Annual Emission Limit of Sulfur Oxides (SO_x)
 - A. PORT-0549 shall emit less than 50 tons of SO_x into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, PORT-0549 shall maintain a daily record of material processed and SO_x. Attachment B, *Monthly Sulfur Oxides (SO_x) Emissions Tracking Record*, or other equivalent forms, will be used for this purpose. PORT-0549 shall maintain these records for five (5) years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
 - C. PORT-0549 shall report to the Air Pollution Control Program Enforcement Section no later than ten (10) days after any exceedances of condition 3.A.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Leo Journagan Construction Company, Inc. (LJCC) has applied for authority to increase their portable asphalt plant's capacity from 325 tons per hour to 385 tons per hour and to remove the emission hourly particulate matter (PM) emission limit in permit 042006-010. On September 6, 2006, AeroMet Engineering completed the stack test required by that permit. This test showed the asphalt plant exceeded the 0.42 pounds of PM per hour emission limitation. The emission points are listed in the attached spreadsheet summary. This installation is classified under the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2, Item 27]. The installation is located in Christian County, an attainment area for all criteria air pollutants.

If LJCC decides to relocate this portable plant to a previously permitted site, a new 21-day relocation request will be required to account for the increased drum dryer emissions.

Table 1: Construction Permits Issued for PORT-0549

Permit Number	Completed	Description
042006-010	4/24/2006	New Portable Asphalt Plant

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutants of concern are PM₁₀, CO, and SO_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". Emissions from the drum dryer were calculated based on Air Pollution Control Program approved compliance testing results, which were submitted by the applicant. Emissions from the diesel generator were based on tier 2 emission limits in 40 CFR 68.112 Oxides of Nitrogen, Carbon Monoxide, Hydrocarbon, and Particulate Matter Exhaust Emission Standards. Based on the conditioned potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

The asphalt plant has an annual emission limit of less than 50 tons of sulfur oxides (SO_x) in any 12-month period while operating at the McCracken Quarry. This emission limit was requested by the applicant to avoid refined modeling for SO_x. The asphalt plant also has an annual emission limit of less than 100 tons of carbon monoxide (CO) in any 12-month period regardless of the plant's location. This limit is required for all portable sources in 10 CSR 10-060 Section (4).

Table 2: Emissions Summary (tons per year)

Air Pollutant	Regulatory De Minimis Levels	*Existing Potential Emissions	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Application	**Installation Conditioned Potential at McCracken Quarry	***Installation Conditioned Potential regardless of site.
PM ₁₀	15.0	14.05	0.03	33.51	8.24	N/A
SO _x	40.0	28.08	0.18	203.36	< 50	83.08
NO _x	40.0	137.90	1.36	139.97	34.42	57.18
VOC	40.0	47.06	1.67	56.60	13.92	23.12
CO	100.0	200.87	6.80	244.79	60.19	< 100
HAPs	10.0/25.0	5.61	0.28	14.72	3.62	6.01

Note: N/A = Not Applicable; N/D = Not Determined

* Existing potential emissions are the unconditioned emissions from permit # 042006-010

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

*** Conditioned potential based on portable source limit.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Screening tools were used to evaluate the ambient air impact of PM₁₀ and SO_x emissions from this operation to insure conformity to the National Ambient Air Quality Standards (NAAQS). The ambient impact was evaluated at the nearest property boundary, which is 550 feet from the plant. The screening tools were used to develop an ambient impact factor for the portable asphalt plant. The results of the screening evaluation are summarized in table 3.

The drum dryer and diesel engines were modeled as point sources using Screen View v1.4. Release parameters for these units are listed in table 4. All other sources were modeled using the Air Pollution Control Programs nomographs.

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.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	Ambient Impact Factor (µg/m³/ton)	Modeled Impact (µg/m³)	*Background (µg/m³)	NAAQS (µg/m³)	Averaging Time
SO _x	N/A	25.21	N/A	80.00	Annual
SO _x	N/A	126.04	N/A	365.00	24-hour
SO _x	N/A	283.58	N/A	1300.00	3-hour
PM ₁₀	0.0029	26.69	20.00	150.00	24-hour

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

Table 4: Release Parameters

Unit	Stack Height (m)	Stack Inside Diameter (m)	Stack Gas Exit Velocity (m/s)	Stack Gas Exit Temperature (K)
Drum Dryer	7.9400	1.4600	8.7807	407.6500
Diesel Generator	3.0480	0.2032	82.1950	783.0389

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
- *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 I, *Standards of Performance for Hot Mix Asphalt Facilities*, 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.

Michael Mittermeyer
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Leo Journagan Construction Company, 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.
- AeroMet Engineering, Inc., Compliance Testing Particulate Matter and Opacity Emissions Determination Aggregate Drum Dryer Baghouse Asphalt Plant PORT0549-Plant No. 10-009 McCracken Quarry-Sparta, Missouri, September 6, 2006.
- Code of Federal Regulations Title 40 Part 89 Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines.

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. Perry Schneider
Environmental Compliance Manager
Leo Journagan Construction Company, Inc.
3003 E. Chestnut Expressway, Suite 1200
Springfield, MO 65802

RE: New Source Review Permit - Project Number: 2007-05-078

Dear Mr. Schneider:

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 that you submitted for project 2007-05-078 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 Michael Mittermeyer 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 attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:mml

Enclosures

c: Southwest Regional Office
PAMS File: 2007-05-078
Permit Number: