

STATE OF MISSOURI



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: **07 2 0 0 9 - 0 0 9** Project Number: 2009-06-014

Parent Company: George C. Potterfield Trucking, Incorporated

Parent Company Address: 207 County Line Road, Monroe City, MO 63456

Installation Name: George C. Potterfield Trucking, Incorporated

Installation Address: 46445 Sweetbay Lane, Huntington, MO 63401

Location Information: Ralls County, S16, T56N, R6W

Application for Authority to Construct was made for:

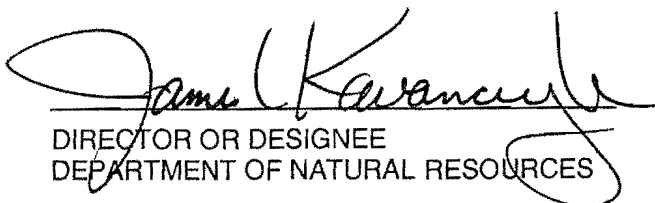
The installation of a limestone drying operation. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

JUL 15 2009

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 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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Project No.	2009-06-014

### 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."*

George C. Potterfield Trucking, Incorporated  
Ralls County, S16, T56N, R64

1. **Best Management Practices**  
George C. Potterfield Trucking, Incorporated (Potterfield Trucking) 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. **Ambient Air Impact Limitation of PM<sub>10</sub>**
  - A. Potterfield Trucking shall ensure, while operating at this site, that the ambient impact of particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) at or beyond the nearest property boundary does not exceed 150.0 µg/m<sup>3</sup> in any 24-hour period.
  - B. To demonstrate compliance, Potterfield Trucking shall maintain a daily record of material processed. Attachment A, "Daily Ambient PM<sub>10</sub> Impact Tracking Record", or other equivalent form(s), shall be used for this purpose.
  - C. Potterfield Trucking shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.B. indicate that the source exceeds the limitation of Special Condition Number 2.A.
3. **Annual Emission Limitation - PM<sub>10</sub>**
  - A. Potterfield Trucking shall emit less than 15.0 tons of PM<sub>10</sub> in any consecutive 12 month period from the entire installation as summarized in Table 1.
  - B. Potterfield Trucking shall maintain an accurate record of PM<sub>10</sub> emitted into the atmosphere from the entire installation as summarized in Table 1. Attachment B or an equivalent form shall be used for this purpose.

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#### SPECIAL CONDITIONS:

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

- C. Potterfield Trucking shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 3.B. indicate that the source exceeds the limitation of Special Condition Number 3.A.
4. Annual Emission Limitation - NO<sub>x</sub>
    - A. Potterfield Trucking shall emit less than 40.0 tons of Nitrogen Oxides (NO<sub>x</sub>) in any consecutive 12 month period from the drum dryer (EU5).
    - B. Potterfield Trucking shall maintain an accurate record of NO<sub>x</sub> emitted into the atmosphere from the drum dryer (EU5). Attachment C or an equivalent form shall be used for this purpose.
    - C. Potterfield Trucking shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 4.B. indicate that the source exceeds the limitation of Special Condition Number 4.A.
5. Moisture Content Testing Requirement
    - A. Potterfield Trucking shall verify that the moisture content of the wet limestone sand stockpile (prior to the drum dryer (EU5)) is greater than or equal to 1.50 wt.% by testing at least one time per year.
    - 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 initial test shall be conducted no later than 45 days after equipment startup.
    - C. In lieu of testing, Potterfield Trucking may obtain a copy of the test results of the inherent moisture content from the supplier(s) of the limestone sand. 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 Potterfield Trucking's main office.
    - D. If the moisture content result of the first test is less than 1.50 wt.%, a second test must be performed within 30 days. If the result of the second test is less than 1.50 wt.%, Potterfield Trucking shall apply for a new

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## SPECIAL CONDITIONS:

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

construction permit to account for the revised information.

### 6. Control Device Requirement – Cyclone and Baghouse

- A. Potterfield Trucking shall control emissions from the drum dryer (EU5) using a cyclone (CD1) and a baghouse (CD2) as specified in the permit application. The baghouse 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 DNR employees may easily observe them. Replacement filters for the baghouse 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).
- B. Potterfield Trucking shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- C. Potterfield Trucking shall maintain an operating and maintenance log for the baghouse which shall include the following:
  - I. Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
  - II. Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

### 7. Record Keeping Requirements

Potterfield Trucking 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. The following is a summary of the records and logs required by this permit:

- A. Attachment A (or an equivalent form) to record the Daily PM<sub>10</sub> ambient impact from the entire installation as summarized in Table 1.
- B. Attachment B (or an equivalent form) to record the Monthly PM<sub>10</sub> emissions from the entire installation as summarized in Table 1.
- C. Attachment C (or an equivalent form) to record the Monthly NO<sub>x</sub> emissions from the drum dryer (EU5).
- D. Annual moisture content testing of the wet limestone sand stockpile.
- E. Operating, maintenance, and pressure drop log for the baghouse (CD2).

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

Project Number: 2009-06-014  
Installation ID Number: 173-0042  
Permit Number:

George C. Potterfield Trucking, Incorporated  
46445 Sweetbay Lane  
Huntington, MO 63401

Complete: June 2, 2009

Parent Company:  
George C. Potterfield Trucking, Incorporated  
207 County Line Road  
Monroe City, MO 63456

Ralls County, S16, T56N, R64

REVIEW SUMMARY

- George C. Potterfield Trucking, Incorporated has applied for authority to construct a limestone drying operation at the Central Stone Quarry in Huntington, Missouri.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment due to the combustion of Fuel Oil. Potential HAP emissions are less than their respective Screening Model Action Levels (SMALs).
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS) does not apply to the equipment because the operation does not have a crusher or a grinder.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A cyclone (CD1) and a baghouse (CD2) are being used to control the PM<sub>10</sub> emissions from the drum dryer (EU5).
- 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<sub>10</sub> and NO<sub>x</sub> are limited to below de minimis levels.
- This installation is located in Ralls County, an attainment area for all criteria air pollutants.

- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was performed to determine the ambient impact of PM<sub>10</sub>.
- Emissions testing is not required for the source.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

### INSTALLATION/ PROJECT DESCRIPTION

George C. Potterfield Trucking, Incorporated (Potterfield Trucking) has proposed to construct a new limestone sand drying operation. The dried limestone sand will be used as a desulfurization agent in the flue gas from coal fired boilers. Drying the limestone is important to the pneumatic conveying systems used to introduce the limestone into the desulfurization process.

Potterfield Trucking will be located on 6 acres of land leased from the Central Stone Company's Huntington Quarry (Central Stone) which is 10 miles west of Hannibal in Ralls County, Missouri. Potterfield Trucking's sand drying operation (173-0042) and Central Stone (173-0003) will not be considered the same source. Although the sites have the same Source Identification Code (SIC), 1422 *Crushed and Broken Limestone*, and the facilities are located on adjacent properties, the facilities do not have common control as they have separate owners and no contractual agreements. Therefore, the operations shall be considered independent for construction permitting purposes. As this is a new source, no prior construction permits have been issued to Potterfield Trucking from the Air Pollution Control Program.

The ambient impact from Central Stone shall not be combined with the ambient impact from Potterfield Trucking. Central Stone's permit requires that the primary crusher be located more than 1000 feet from the nearest property boundary, and Potterfield Trucking will be located no less than 2000 feet from Central Stone's primary crusher. In addition to the substantial distance between the primary emission units, Potterfield Trucking will also not share any haul roads with Central Stone. For these reasons, their activities shall also be considered independent for an ambient air quality impact analysis.

Potterfield Trucking's sand drying operation will consist of drying limestone sand that has been quarried, crushed, and stockpiled by Central Stone. A front end loader will transfer (EU1) sand from the wet limestone sand stockpile to the feed bins (EU2). Two conveyors (EU3 and EU4) operating in series will transfer the sand to an 82.4 million Btu per hour drum dryer (EU5) which will dry the sand from 5% moisture to less than 1% moisture. A cyclone (CD1) and a baghouse (CD2) will be used to control the particulate emissions from the drum dryer (EU5). The dried sand will be transferred by

a third and fourth conveyor (EU6 and EU7) to the dry sand storage pile located inside an enclosed storage building. Inside the building, dried sand will be loaded (EU8) with the front end loader to a hopper (EU9) and conveyor (EU10) for load out into tanker trucks for shipment offsite.

Potterfield Trucking plans to use Best Management Practices (BMP) to control particulate emissions from the 400 foot gravel haul road (EU11) and stock piles. The maximum design rate for the equipment in this permit is limited by the 200 ton per hour drum dryer (EU5). No other combustion emissions are expected from this facility as the equipment in this application will be powered by electricity. The following table provides a summary of the emission units considered for this application.

**Table 1: Emission Unit Summary**

Emission Unit ID	Description	MHDR	MHDR Units
EU1	Sand Load Out	200	Tons per hour
EU2	Sand Transfer (Bins)	200	Tons per hour
EU3	Conveyor 1	200	Tons per hour
EU4	Conveyor 2	200	Tons per hour
EU5	Drum Dryer	200	Tons per hour
		82.4	Million Btu per hour
EU6	Dry Sand Conveyor 3	200	Tons per hour
EU7	Dry Sand Storage Pile (Conveyor 4)	200	Tons per hour
EU8	Dry Sand Load Out	200	Tons per hour
EU9	Dry Sand Hopper	200	Tons per hour
EU10	Dry Sand Conveyor 5	200	Tons per hour
EU11	Haul Road	400	Feet

### EMISSIONS/CONTROLS EVALUATION

Potterfield Trucking has requested the flexibility to use either #2 fuel oil or # 4 fuel oil as the fuel for the drum dryer (EU5). Therefore, the potential combustion emissions for the drum dryer (EU5) were determined for the worst case fuel. As the sand prior to being dried is expected to have a moisture content exceeding 1.5%, a control efficiency of 95.8% was applied to the emission units (EU2-EU4) preceding the drum dryer (EU5). Therefore, a special condition of this permit is that Potterfield Trucking shall test the moisture content of the wet limestone sand stockpile to ensure that the moisture content is greater than 1.5%. As the dry limestone sand is being stored inside an enclosed building, a combined capture and control efficiency of 3.7% was applied for the emission units (EU7-EU10) located inside the building.

All other emission factors and control efficiencies used in this analysis were obtained from the following sections of the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition: Section 1.3 *Fuel Oil Combustion* (September 1998), Section 11.19.2 *Crushed Stone Processing and*



*Pulverized Mineral Processing* (August 2004), Section 13.2.2 *Unpaved Roads* (November 2006), and Section 13.2.4 *Aggregate Handling and Storage Piles* (November 2006). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

**Table 2: Emissions Summary (tons per year)**

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential*
PM <sub>10</sub>	15.0	N/A	N/A	41.49	<15.0
SO <sub>x</sub>	40.0	N/A	N/A	0.60	0.46
NO <sub>x</sub>	40.0	N/A	N/A	52.30	<40.0
VOC	40.0	N/A	N/A	1.45	1.11
CO	100.0	N/A	N/A	13.07	10.00
HAPs	10.0/25.0	N/A	N/A	0.09	0.07

N/A = Not Applicable

\*Potential emissions of PM<sub>10</sub> are limited to less than 15.0 tons per year and the potential emissions of NO<sub>x</sub> are limited to less than 40.0 tons per year. The potential emissions of pollutants other than PM<sub>10</sub> are proportionately reduced by the NO<sub>x</sub> emission limit.

The potential daily emissions of PM<sub>10</sub> have been limited to comply with the National Ambient Air Quality Standards (NAAQS). The potential annual emissions of PM<sub>10</sub> and NO<sub>x</sub> have been limited to less than de minimis levels to avoid increment modeling. The emission factors developed for compliance demonstration are documented on the attachments A, B, and C.

#### 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<sub>10</sub> and NO<sub>x</sub> are limited to below de minimis levels.

#### APPLICABLE REQUIREMENTS

George C. Potterfield Trucking, Incorporated 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.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170*
- *Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220*
- *Restriction of Emission of Odors, 10 CSR 10-3.090*

## SPECIFIC REQUIREMENTS

- *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*

## AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of PM<sub>10</sub>. Particulate emissions from the equipment other than the drum dryer (EU5) were modeled as a volume source using Nomograph tables developed by the Air Pollution Control Program. 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/m<sup>3</sup> of PM<sub>10</sub>. The particulate emissions from the drum dryer (EU5) were modeled as a point source using Screen3 and the following stack parameters: release height = 35 feet, stack diameter = 3.63 feet, exhaust temperature = 325°F, and exhaust velocity = 1575 feet per minute. The nearest property boundary for this project is expected to be no less than 150 feet from the drum dryer (EU5). The ambient impact of PM<sub>10</sub> shall not exceed the National Ambient Air Quality Standards (NAAQS) listed in table 3.

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

Pollutant	Ambient Impact Factor ( $\mu\text{g}/\text{m}^3\text{ton}$ )	Modeled Impact ( $\mu\text{g}/\text{m}^3$ )	*Background ( $\mu\text{g}/\text{m}^3$ )	NAAQS ( $\mu\text{g}/\text{m}^3$ )	Averaging Time	Daily Production Limit (tons)
PM <sub>10</sub>	0.0505	130.0	20.0	150.0	24-hour	2575

\* Background PM<sub>10</sub> level of 20.00  $\mu\text{g}/\text{m}^3$  from haul roads and stockpiles.

**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.

\_\_\_\_\_  
 Kathi Jantz  
 Environmental Engineer

\_\_\_\_\_  
 Date

**PERMIT DOCUMENTS**

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 1, 2009, received June 2, 2009, designating George C. Potterfield Trucking, Incorporated as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Northeast Regional Office Regional Office Site Survey, dated June 11, 2009.

**Attachment A - Daily Ambient PM<sub>10</sub> Impact Tracking Record**

George C. Potterfield Trucking, Incorporated  
 Ralls County, S16, T56N, R64  
 Project Number: 2009-06-014  
 Installation ID Number: 173-0042  
 Permit Number: \_\_\_\_\_

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.  
 (month, day, year) (month, day, year)

Date	Daily Production (tons)	Ambient Impact Factor (µg/m <sup>3</sup> /ton)	<sup>1</sup> Daily Impact (µg/m <sup>3</sup> )	<sup>2</sup> Back-ground Level (µg/m <sup>3</sup> )	<sup>3</sup> TOTAL Level (µg/m <sup>3</sup> )
Example	2000	0.0505	101.0	20.0	121.0
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	
		0.0505		20.0	

Note 1: The Daily Impact (µg/m<sup>3</sup>) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.  
 Note 2: Background Level (µg/m<sup>3</sup>) is from Haul Roads and Stockpiles and is equal to 20.0  
 Note 3: The TOTAL Level (µg/m<sup>3</sup>) is calculated by summing the Daily Ambient Impact(s) and the Background Level. A TOTAL Level not greater than 150 µg/m<sup>3</sup> in any 24-hour period indicates compliance.

### Attachment B - Monthly PM<sub>10</sub> Compliance Worksheet

George C. Potterfield Trucking, Incorporated  
 Ralls County, S16, T56N, R64  
 Project Number: 2009-06-014  
 Installation ID Number: 173-0042  
 Permit Number: \_\_\_\_\_

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.  
(month, year) (month, year)

Month	Monthly Amount of Sand Dried (tons)	PM <sub>10</sub> Emission Factor (lbs/ton)	Monthly PM <sub>10</sub> Emissions <sup>2</sup> (lbs)	Monthly PM <sub>10</sub> Emissions <sup>3</sup> (Tons)	12-Month PM <sub>10</sub> Emissions <sup>4</sup> (Tons/Year)
Example	8000	0.0474	379.2	0.19	
		0.0474			
		0.0474			
		0.0474			
		0.0474			
		0.0474			
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		0.0474			
		0.0474			
		0.0474			
		0.0474			
		0.0474			
		0.0474			
		0.0474			
		0.0474			

Note 1: Enter the monthly total of sand dried in the drum drier (EU5) in tons per month  
 Note 2: The Monthly Emissions (lbs) are calculated by multiplying the Monthly sand dried (tons) by the PM<sub>10</sub> Emission Factor (lbs PM<sub>10</sub>/tons sand dried).  
 Note 3: The Monthly Emissions (tons) are calculated by dividing the Monthly emissions (lbs) by 2000  
 Note 4: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than **15.0** tons in any consecutive 12-month period indicates compliance.

## Attachment C - Monthly NO<sub>x</sub> Compliance Worksheet

George C. Potterfield Trucking, Incorporated  
 Ralls County, S16, T56N, R64  
 Project Number: 2009-06-014  
 Installation ID Number: 173-0042  
 Permit Number: \_\_\_\_\_

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.  
(month, year) (month, year)

Month	Monthly Amount of Fuel Burned (10 <sup>3</sup> gallons) <sup>1</sup>	NO <sub>x</sub> Emission Factor (tons/10 <sup>3</sup> gallons) <sup>2</sup>	Monthly NO <sub>x</sub> Emissions <sup>3</sup> (Tons)	12-Month NO <sub>x</sub> Emissions <sup>4</sup> (Tons/Year)
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
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		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		
		0.01		

Note 1: Enter the monthly total of fuel oil used in the drum dryer (EU5) in units of thousands of gallons  
 Note 2: The NO<sub>x</sub> Emission Factor is in units of tons NO<sub>x</sub> per thousand gallons of fuel oil (#2 fuel oil or #4 fuel oil)  
 Note 3: The Monthly Emissions (tons) are calculated by multiplying the Monthly Fuel Usage (thousand gallons) by the NO<sub>x</sub> Emission Factor (tons NO<sub>x</sub> /thousand gallons).  
 Note 4: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than **40.0** tons in any consecutive 12-month period indicates compliance.

## 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 concrete, 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<sup>1</sup>” 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.

<sup>1</sup> 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 concrete, 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. Randy Potterfield  
President  
George C. Potterfield Trucking, Incorporated  
207 County Line Road  
Monroe City, MO 63456

RE: New Source Review Permit - Project Number: 2009-06-014

Dear Mr. Potterfield:

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 and your new source review permit application 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 Kathi Jantz, at the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:kjl

Enclosures

c: Northeast Regional Office  
PAMS File: 2009-06-014  
Permit Number: