

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: 012012-0111

Project Number: 2011-08-075
Installation ID: 091-0083

Parent Company: Pace Construction Company LLC

Parent Company Address: 1620 Woodson Road, St. Louis, MO 63114

Installation Name: Pace Construction Company, West Plains Plant

Installation Address: 2516 County Road 4300, West Plains, MO 65775

Location Information: Howell County, S7, T24N, R8W

Application for Authority to Construct was made:

To provide the Pace Construction Company, West Plains Plant, the flexibility to use natural gas, in addition to waste diesel fuel, to fuel their drum dryer and asphalt concrete heater at their stationary asphalt plant. 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.

JAN 18 2012

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.

Page No.	3
Permit No.	
Project No.	2011-08-075

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 3 and Special Condition 9 found in the previously issued construction permit 082008-001 from the Air Pollution Control Program.

2. Annual Emission Limit for SO_x

A. Pace Construction Company, West Plains Plant shall emit less than 40.0 tons of sulfur oxides (SO_x) in any 12-month period from the entire installation.

B. Pace Construction Company, West Plains Plant shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

3. Annual Emission Limit for PM_{2.5}

A. Pace Construction Company, West Plains Plant shall emit less than 10.0 tons of particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) in any 12-month period from the entire installation.

B. Pace Construction Company, West Plains Plant shall demonstrate compliance with Special Condition 3.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Fuel Requirement - Drum Dryer

A. Pace Construction Company, West Plains Plant shall burn waste diesel fuel with a sulfur content less than or equal to 2.0 percent by weight or natural gas in their drum dryer.

B. Pace Construction Company, West Plains Plant shall demonstrate compliance with Special Condition 4.A by obtaining records from the vendor of the sulfur content for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 *Reference Methods*.

Page No.	4
Permit No.	
Project No.	2011-08-075

SPECIAL CONDITIONS:

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

- C. Pace Construction Company, West Plains Plant shall keep the records required by Special Condition 4.B with the unit and make them available for Department of Natural Resources' employees upon request.

- 5. Fuel Requirement – Asphalt Concrete Heater
 - A. Pace Construction Company, West Plains Plant shall burn diesel fuel with a sulfur content less than or equal to 0.50 percent by weight or natural gas in their asphalt concrete heater.

 - B. Pace Construction Company, West Plains Plant shall demonstrate compliance with Special Condition 5.A by obtaining records from the vendor of the sulfur content for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 *Reference Methods*.

 - C. Pace Construction Company, West Plains Plant shall keep the records required by Special Condition 5.B with the unit and make them available for Department of Natural Resources' employees upon request.

- 6. Record Keeping Requirement
Pace Construction Company, West Plains Plant 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.

- 7. Reporting Requirement
Pace Construction Company, West Plains Plant 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: 2011-08-075
Installation ID Number: 091-0083
Permit Number:

Pace Construction Company, West Plains Plant
2516 County Road 4300
West Plains, MO 65775

Complete: August 25, 2011

Parent Company:
Pace Construction Company LLC
1620 Woodson Road
St. Louis, MO 63114

Howell County, S7, T24N, R8W

PROJECT DESCRIPTION

The Pace Construction Company, West Plains Plant, herein referred to as Pace Construction, has requested the flexibility to use natural gas, in addition to waste diesel fuel, to fuel their drum dryer and asphalt concrete heater at their stationary asphalt plant.

Pace Construction already has the capability of using waste diesel fuel with a sulfur content equal to or less than 2.0 percent by weight to fuel their drum dryer and the capability of using diesel fuel with a sulfur content equal to or less than 0.50 percent by weight to fuel their asphalt concrete heater at this stationary asphalt plant. When using this waste fuel in their drum dryer, emissions of sulfur oxides (SO_x) are needed to be limited below the 40.0 tons per year de minimis level to show compliance to Construction Permit 082008-001. When using natural gas to fuel the drum dryer at this stationary plant, SO_x emissions are no longer need to be limited, and therefore, all emissions at this asphalt plant were reevaluated.

The maximum hourly design rate of this asphalt plant is 350 tons per hour. The drum dryer has a fabric filter control device. The burner's input capacity is rated at 120 million British thermal unit per hour (MMBTU/hr). The asphalt concrete heater's input capacity is rated at one MMBTU/hr. The conveyors and screen of this plant is powered by electricity from line power. 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. Because the fuel change to natural gas will not significantly affect the emissions of particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) on a daily bases, an ambient air quality impact analysis was not redone.

This installation is located in Howell 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 100.0 tons per year and fugitive emissions are counted toward major source applicability.

Doss & Harper Stone Co., Inc. operates a stationary rock-crushing plant (091-0015) at this site.

TABLES

The following permit has been issued to Pace Construction Company, West Plains Plant from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
082008-001	New stationary asphalt plant

The table below summarizes the emissions of this project. The existing potential emissions of this installation are from Permit Number 082008-001. The existing actual emissions were taken from the previous year's Emissions Inventory Questionnaire (EIQ). The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year) when natural gas is used to fuel the drum dryer burner and asphalt concrete heater. The conditioned potential emissions are based on voluntary limit of 10.0 tons per year of particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) because of the use of natural gas to fuel the drum dryer and asphalt concrete heater. The SO_x conditioned potential emissions are based on a voluntary 40.0 ton per year limit from Permit Number 082008-001 that was incorporated in this permit because of the continued use of waste fuel.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	N/D	N/D	54.86	13.31
PM ₁₀	15.0	6.84	4.18	24.54	5.95
PM _{2.5}	10.0	N/D	N/D	41.22	< 10.0
SO _x	40.0	< 40	0.13	5.21	< 40.0
NO _x	40.0	6.2	1.31	40.29	9.77
VOC	40.0	3.58	1.54	73.75	17.89
CO	100.0	14.55	0.02	203.53	49.38
Total HAPs	25.0	1.12	N/D	8.55	2.08

N/D = Not Determined

EMISSIONS CALCULATIONS

The potential emissions of this project include emissions from the entire installation because the use of natural gas to fuel the drum dryer and asphalt concrete heater changes this installation's potential annual hours of operation, which affects other emission points at this installation. Pace Construction has requested that all criteria pollutants be limited below their respective de minimis level to avoid modeling requirements. When waste fuel is used to power the drum dryer at this plant, SO_x emissions are needed to be limited below the 40.0 tons per year de minimis level. When natural gas is used to power the drum dryer at this plant, PM_{2.5} emissions are needed to be limited below the 10.0 tons per year de minimis level. Most 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).

In Permit Number 082008-001, stack test data was used to calculate the particulate matter (PM) emissions and PM₁₀ emissions from the drum dryer. The stack testing indicated a PM emission rate of 0.44 pounds of PM per hour and a control efficiency of 99.97 percent for PM₁₀. AP-42 states in Table 11.1-3, that the fuel type does not significantly affect PM emissions from the drum mix dryer. Therefore, the option of using natural gas as a fuel does not affect the use of stack testing for PM. The PM emission rate and the control efficiency for PM₁₀ from of the stack test were incorporated in this permit.

Other emissions from the drum mix asphalt plant were calculated using emission factors from AP-42 Section 11.1 "Hot Mix Asphalt Plants," April 2004. The asphalt plant is controlled by a baghouse.

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 concrete heater were calculated using emission factors from AP-42 Section 1.4. 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 Best Management Practices. 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."

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_{2.5} and SO_x are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Pace Construction Company, West Plains Plant 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.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- *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 Williams
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 22, 2011, received August 25, 2011, designating Pace Construction Company LLC 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 September 7, 2011.

Attachment A: SO_x Annual Emissions Tracking Sheet
Pace Construction Company, West Plains Plant 091-0083
Project Number: 2011-08-075
Permit Number:

Site Name: Pace Construction Company, West Plains Plant
Site Address: 2516 County Road 4300, West Plains, MO 65775
Site County: Howell County, S7, T24N, R8W

This sheet covers the period from _____ to _____ (Copy as needed)
(Month, Year) (Month, Year)

Equipment Description	(a) Monthly Production (tons)	(b) Composite SO _x Emission Factor (lb/ton)	(c) Monthly SO _x Emissions (lbs)
Drum Dryer – Waste Fuel		0.356	
Drum Dryer – Natural Gas		0.0034	
Asphalt Concrete Heater – Diesel Fuel		0.00146	
Asphalt Concrete Heater – Natural Gas		0.000003	
(d) Total Monthly SO _x Emissions (lbs)			
(e) Total Monthly SO _x Emissions (tons)			
(f) 12-Month SO _x Emissions (h) from Previous Month's Attachment A (tons)			
(g) Total Monthly SO _x Emissions (e) from Previous Year's Attachment A (tons)			
(h) Current 12-Month SO _x Emissions (tons) (h) = [(e) + (f) – (g)]			

- (a) Record this month's production with the corresponding fuel usage.
- (c) Multiply the Monthly Production (a) by the respective Composite Emission Factor (b).
- (d) Sum all the Monthly SO_x Emissions.
- (e) Divide the Total Monthly SO_x Emissions (d) by 2,000.
- (f) Record the 12-Month SO_x Emissions (h) from the Previous Month's Attachment A.
- (g) Record the Total Monthly SO_x Emissions (e) from the Previous Year's Attachment A.
- (h) Calculate the Current 12-Month PM₁₀ Emissions. A total less than **40.0** tons of SO_x indicates compliance.

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 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. Joe Reichmuth
Safety Manager
Pace Construction Company, West Plains Plant
1620 Woodson Road
St. Louis, MO 63114

RE: New Source Review Permit - Project Number: 2011-08-075

Dear Mr. Reichmuth:

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 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 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

Susan Heckenkamp
New Source Review Unit Chief

SH:dwk

Enclosures

c: Southeast Regional Office
PAMS File: 2011-08-075

Permit Number: