

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: 072013-006

Project Number: 2013-04-102
Installation ID: PORT-0694

Parent Company: Pace Construction Company

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

Installation Name: Pace Construction Company

Installation Address: County Road 142 E-20, Doniphan, MO 63935

Location Information: Ripley County, S30, T23N, R3E

Application for Authority to Construct was made for:
Installation of a portable roller compacted concrete plant. This review was conducted in accordance with Section (6), 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 2013

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 Department's 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.	2013-04-102

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) 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. Equipment Identification Requirement

Pace Construction Company shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable concrete plant.

2. Relocation of Portable Concrete Plant

A. Pace Construction Company shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0693, contain a nonroad engine requirement limiting the portable plant at the site specific location to 12 consecutive months.

B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable concrete plant.

1) If the portable concrete plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.

2) If the portable concrete plant is moving to a new site, or if circumstances at the site have changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Record Keeping Requirement

Pace Construction Company shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

4. Reporting Requirement

Pace Construction Company 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.

Page No.	4
Permit No.	
Project No.	2013-04-102

SITE SPECIFIC 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."

PORT ID Number: PORT-0694

Site ID Number: 181-0024

Site Name: Doniphan Ready Mix

Site Address: County Road 142 E-20, Doniphan, MO 63935

Site County: Ripley County, S30, T23N, R3E

1. **Best Management Practices Requirement**
Pace Construction Company shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.
2. **Ambient Air Impact Limitation**
 - A. Pace Construction Company shall not cause an exceedance of the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in aerodynamic diameter (PM_{10}) of $150.0 \mu\text{g}/\text{m}^3$ 24-hour average in ambient air.
 - B. Pace Construction Company shall demonstrate compliance with Special Condition 2.A using Attachment A or other equivalent forms that have been approved by the Air Pollution Control Program, including an electronic form.
3. **Annual Emission Limit**
 - A. Pace Construction Company shall emit less than 10.0 tons of $PM_{2.5}$ in any 12-month period from the entire installation.
 - B. Pace Construction Company 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. **Control Device Requirement-Baghouse**
 - A. Pace Construction Company shall control emissions from the cement silo using a baghouse as specified in the permit application.
 - B. Pace Construction Company shall conduct opacity readings on the fabric filter using EPA Method 22. Readings shall be taken when the cement silo is in operation and when weather conditions allow, at least once daily.

Page No.	5
Permit No.	
Project No.	2013-04-102

SITE SPECIFIC SPECIAL CONDITIONS:

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

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions shall be implemented.
 - a.) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b.) The duration of the observation shall be two minutes.
 - c.) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions shall be implemented in order to regain operation that does not cause any visible emissions.

- C. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. Pace Construction Company shall maintain a copy of the baghouse manufacturer's performance warranty on site.

- D. Pace Construction Company shall maintain an operating and maintenance log for the baghouse 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.

5. Non-Road Engine
PORT-0694 cannot operate at this site longer than 12 consecutive months in order to avoid recordkeeping showing the movement of the Iveco diesel engine. To meet the definition of a nonroad engine as stated in 40 CFR 89.2(1), the engine cannot remain in one physical location for longer than 12 months. Pace Construction Company shall adhere to the requirements found in 40 CFR 89.2 "Non-Road Engine" (1)(i) through (iii) in order for their diesel engine (EP-8) to be classified as a non-road engine

6. Minimum Distance to Property Boundary Requirement
The primary emission point shall be located at least 700 feet from the nearest property boundary.

7. Concurrent Operation Restriction
Pace Construction Company is prohibited from operating whenever other plants are located at the site.

Page No.	6
Permit No.	
Project No.	2013-04-102

SITE SPECIFIC SPECIAL CONDITIONS:

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

8. Record Keeping Requirement
Pace Construction Company 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.

9. Reporting Requirement
Pace Construction Company 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 (6) REVIEW

Project Number: 2013-04-102

Installation ID Number: PORT-0694

Permit Number:

Pace Construction Company
County Road 142 E-20
Doniphan, MO 63935

Complete: May 7, 2013

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

Ripley County, S30, T23N, R3E

PROJECT DESCRIPTION

Pace Construction Company proposes the construction of a portable roller compacted concrete plant. The equipment will be rented from Rapid International USA, Inc. and installed at Eagle Wings Construction, LLC, d.b.a. Doniphan Ready Mix Site (181-0023) in Ripley County. Doniphan Ready mix was issued construction permit 082006-009; however, the ready mix concrete plant has not been fully constructed. Pace has also submitted an application to relocate PORT-0564 to this site. However, the asphalt plant (PORT-0564) will setup after the roller compacted concrete plant (PORT-0694) has finished operating. Therefore, PORT-0564 will not operate concurrently with any other plants at this site. The new roller compacted concrete plant is capable of producing up to 400.0 tons of concrete per hour. 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 Ripley County, an attainment area for all criteria pollutants. This installation is not 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 not counted toward major source applicability.

No permits have been issued to Pace Construction Company PORT-0694 from the Air Pollution Control Program.

TABLES

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. 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 include emissions

from sources that will limit their production to ensure compliance with the annual emission limit and ensure compliance with the NAAQS.

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	^a Potential Emissions of Process Equipment	Existing Actual Emissions (2012 EIQ)	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	168.63	N/A	432.37	64.47
PM ₁₀	15.0	59.67	N/A	146.16	21.80
PM _{2.5}	10.0	29.98	N/A	67.06	<10.0
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
GHG (CO ₂ e)	100,000	N/A	N/A	N/A	N/A
GHG (mass)	250.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

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

^aExcludes site specific haul road and storage pile emissions

^bIncludes site specific haul road and storage pile emissions

Table 2: Ambient Air Quality Impact Analysis

Pollutant	^a NAAQS/RAL (µg/m ³)	Averaging Time	^b Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^c Daily Limit (tons/day)
PM ₁₀ ^d (solitary)	150.0	24-hour	581.25	130.0	20.0	4,037

^aNational Ambient Air Quality Standards (NAAQS)

^bModeled impact at maximum capacity with controls

^cIndirect limit based on compliance with NAAQS.

^dOther plants are prohibited from operating when Pace Construction Company PORT-0694 is operating at this site.

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 concrete batch plant were calculated using emission factors from AP-42 Section 11.12 "Concrete Batching," June 2006. This section cites Equation (1) in Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006 for calculating the emissions from aggregate and sand transfer. The cement silo is controlled with a baghouse, so the controlled emission factor was used. Emissions from the aggregate weigh hopper were calculated using AP-42 Section 13.2.4, Equation (1). These

emissions are not controlled by a baghouse so the uncontrolled emission factor was applied to the calculation. Emissions from mixer loading are uncontrolled, so the uncontrolled emission factor was used.

Emissions from the diesel engine were not calculated because it is considered a nonroad engine according to the Site Specific Special Condition 5 of this permit.

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 for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} are 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 0.7% by 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 PM₁₀. 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. 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 µg/m³ of PM₁₀ in accordance with the Air Pollution Control Program's BMPs interim policy.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM and PM₁₀ are above de minimis levels but remain below major source levels.

APPLICABLE REQUIREMENTS

Pace Construction Company 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.
- No Operating Permit is required for this installation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) applies 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.

J Luebbert
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 24, 2013, received April 25, 2013, designating Pace Construction Company as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

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. Jason Poor
Superintendent
Pace Construction Company
1620 Woodson Road
St. Louis, MO 63114

RE: New Source Review Permit - Project Number: 2013-04-102

Dear Mr. Poor:

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 J Luebbert, at the department's 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

Susan Heckenkamp
New Source Review Unit Chief

SH:jl

Enclosures

c: Southeast Regional Office
PAMS File: 2013-04-102

Permit Number: