

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: **012017-003** Project Number: 2016-11-020
Installation Number: PORT-0745

Parent Company: Concrete Company of Springfield

Parent Company Address: P.O. Box 50685, Springfield, MO 65806

Installation Name: Concrete Company of Springfield Portable Plant

Installation Address: 2744 North Mayfair Ave., Springfield, MO 65803

Location Information: Greene County, S4, T29N, R21W

Application for Authority to Construct was made for:
Installation of a new portable 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.

Prepared by
Jordan Hull
New Source Review Unit

Director of Designee
Department of Natural Resources

JAN 04 2017

Effective Date

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of 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's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

GENERAL SPECIFIC 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

Concrete Company of Springfield Portable Plant 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. Concrete Company of Springfield Portable Plant shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0745, 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 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

Concrete Company of Springfield Portable Plant 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

Concrete Company of Springfield Portable Plant shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

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

Site ID Number: PORT-0745

Site Name: Prime Inc.

Site Address: 2744 North Mayfair Ave, Springfield, MO 65806

Site County: Greene S 4, T 29N, R 21W

1. Annual PM₁₀ Emission Limit
 - A. Concrete Company of Springfield Portable Plant PORT- 0745 shall emit less than 15.0 tons of PM₁₀ in any 12-month period from this site.
 - B. Concrete Company of Springfield Portable Plant shall demonstrate compliance with Special Condition 1.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
2. Control Device Requirement- Baghouse
 - A. Concrete Company of Springfield Portable Plant PORT-0745 shall control emissions from the equipment listed below using a baghouse as specified in the permit application.
 - 1) Cement Silo
 - 2) Supplement Silo
 - 3) Weigh Hopper
 - 4) Truck Mix Loadout (shroud vented to baghouse)
 - B. 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 Department of Natural Resources' employees may easily observe them.
 - C. 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).
 - D. Concrete Company of Springfield Portable Plant PORT-0745 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.

SITE SPECIFIC SPECIAL CONDITIONS:

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

- E. Concrete Company of Springfield Portable Plant PORT-0745 shall maintain a copy of the baghouse manufacturer's performance warranty on site.
- F. Concrete Company of Springfield Portable Plant PORT-0745 shall maintain an operating and maintenance log for the 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.
- 3. Undocumented Haul Road Watering
 - A. Concrete Company of Springfield Portable Plant PORT- 0745 shall water storage piles/haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
 - B. Watering may 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.
- 4. Fuel Requirement- Water Heater
 - A. Concrete Company of Springfield Portable Plant shall exclusively burn propane in their two hot water heater (EP-7a & 7b) during concrete production.
- 5. Record Keeping Requirement
 - A. Concrete Company of Springfield Portable 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.
- 6. Reporting Requirement
 - A. Concrete Company of Springfield Portable Plant shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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: 2016-11-020

Installation ID Number: PORT-0745

Permit Number: **01 2017 - 003**

Installation Address:

Concrete Co. of Springfield Portable Plant
2744 North Mayfield Ave.
Springfield, MO 65803

Parent Company:

Concrete Company of Springfield
P.O. Box 50685
Springfield, MO 65806

Greene County, S4, T 29N, R 21W

PROJECT DESCRIPTION

Concrete Company of Springfield has applied to permit their existing stationary concrete plant as a portable concrete plant. The Erie Strayer Mobile Central Mix Concrete Batch Plant (Model: MG-11C) is capable of a MHDR of 532 tph. It will initially be located at Prime Inc. in Springfield, MO. Concrete Co. of Springfield expects this plant to be operational at this location for 2 years. Particulate matter emissions from all the silos, weigh hopper, and truck loading will be controlled by a baghouse. PORT-0475 uses two propane 1.4 MMBTU/hour hot water heaters. The plant will be powered by electric motor from the grid.

Emission Point	Description	MHDR
EP-1	Aggregate Transfer	532 tph
EP-2	Sand Transfer	532 tph
EP-3	Cement Unloading to Silo	532 tph
EP-4	Supplement Unloading (Pneumatic)	532 tph
EP-5	Weigh Hopper	532 tph
EP-6	Truck/ Mixer Loading	532 tph
EP-7a	Hot Water Heater #1	1.4 mmBTU/hr
EP-7b	Hot Water Heater #2	1.4 mmBTU/hr
EP-8a	Aggregate Storage Pile	0.22 acres
EP-8b	Sand Storage Pile	0.22 acres
EP-8c	Sand Storage Pile	0.22 acres
EP-9a	Haul Road #1	1.55 VMT/hr
EP-9b	Haul Road #2	4.65 VMT/hr

This installation is located in Greene 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 Concrete Company of Springfield Portable Plant PORT- 0745 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. Existing actual emissions are from the same plant when it was previously permitted as a stationary 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 PM₁₀ emission limit of 15.0 tons per year for portable plants in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

Table 1: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Potential Emissions of Process Equipment (tons/year)	Existing Actual Emissions	^a Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	31.73	N/D	319.08	43.28
PM ₁₀	15.0	15.40	3.23	110.60	<15.0
PM _{2.5}	10.0	3.69	0.52	18.38	2.49
SO _x	40.0	0.00	0.00	0.00	0.00
NO _x	40.0	1.75	0.02	1.75	0.24
VOC	40.0	0.13	0.00	0.13	0.02
CO	100.0	1.01	0.02	1.01	0.14
GHG (CO ₂ e)	N/A	0.00	N/A	0.0	0.00
GHG (mass)	N/A	0.00	N/A	0.0	0.00
HAPs	10.0/25.0	0.00	N/A	0.0	0.00

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

^aIncludes site specific haul road and storage pile emissions

EMISSIONS/CONTROLS EVALUATION

Emissions for the project were calculated using emission factors found in the United States 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 and supplement silos are controlled with a baghouse, so the controlled emission factors were used. Emissions from the aggregate weigh hopper were

calculated using AP-42 Section 13.2.4, Equation (1). These emissions are controlled by a baghouse so a 99% control factor was applied to the calculation. Emissions from mixer loading are controlled by a shroud vented to a baghouse, so the controlled emission factor was used.

Emissions from the propane heater were calculated using emission factors from AP-42 Section 1.5 Liquefied Petroleum Gas Combustion, July 2008.

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 50% control efficiency for PM and PM₁₀ and a 22.2% control efficiency for PM_{2.5} were applied to the emission calculations for the use of undocumented watering. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4.

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 PM₁₀ are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Concrete Company of Springfield Portable 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.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- A Basic Operating Permit application is not required for this installation because portable plants are exempt from obtaining an operating permit.
- *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 does not apply because silos, weigh hopper and truck loading are controlled by a baghouse. All other sources are fugitive.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- 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.
- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261, exempt from the rule according to 10 CSR 10-6.261 (1)(A) because they exclusively use propane for the water heaters.

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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 24, 2016, received November 7, 2016, designating Concrete Company of Springfield as the owner and operator of the installation.

Attachment A: PM₁₀ Annual Emissions Tracking Sheet
Concrete Company of Springfield Portable Plant Project Number: 2016-11-020
Permit Number: **012017-003**

Site Name: Prime Inc.
Site Address: 2744 North Mayfair Ave., Springfield, MO 65803
Site County: Greene

This sheet covers the period from _____ to _____.(Copy as needed)
(month, year) (month, year)

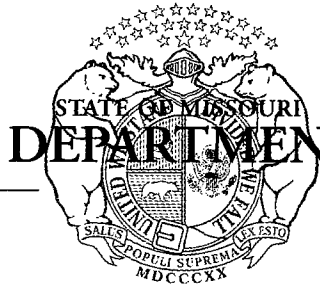
Month	Production (tons)	Emission Factor (lb/ton)	Monthly Emissions ¹ (lbs)	Monthly Emissions ² (tons)	12-Month Total Emissions ³ (tons)
<i>Example</i>	<i>75,000</i>	<i>0.0475</i>	<i>3,562.5</i>	<i>1.78</i>	<i>1.78 + previous 11 months of year</i>
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			
		0.0475			

¹Multiply the monthly production by the emission factor.
²Divide the monthly emissions (lbs) by 2000.
³Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 15.0 tons of PM₁₀ is necessary for compliance.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu ..	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ..	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EIQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		



Jeremiah W. (Jay) Nixon, Governor • Harry D. Bozoian, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

JAN 04 2017

Ms. Ericka Baxter
Asst. Environmental Director
Concrete Company of Springfield Portable Plant
P.O. Box 50685
Springfield, MO 65806

RE: New Source Review Permit - Project Number: 2016-11-020

Dear Ms. Baxter:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions, 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.



Recycled paper

Ms. Ericka Baxter
Page Two

If you have any questions regarding this permit, please do not hesitate to contact Jordan Hull, at the Department of Natural Resources' 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:jhj

Enclosures

c: Southwest Regional Office
PAMS File: 2016-11-020

Permit Number: **01 2 0 1 7 - 0 0 3**