

Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

JUN 04 2018

Mr. David Herbst
Chief Operations Officer
Capital Sand Proppants, LLC
418 County Road 347
Jackson, MO 63755

RE: New Source Review Permit - Project Number: 2017-10-053

Dear Mr. Herbst:

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 condition 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.

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.



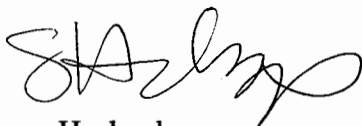
Recycled paper

Mr. David Herbst
Page Two

If you have any questions regarding this permit, please do not hesitate to contact Chad Stephenson, 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



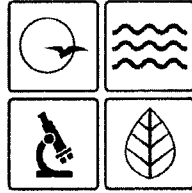
Susan Heckenkamp
New Source Review Unit Chief

SH:csj

Enclosures

c: Southeast Regional Office
PAMS File: 2017-10-053

Permit Number: **06 2018 - 001**



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: **06 2 0 1 8 - 0 0 1** Project Number: 2017-10-053
Installation Number: 031-0139

Parent Company: Capital Sand Proppants, LLC

Parent Company Address: P.O. Box 104990, Jefferson City, MO 65110

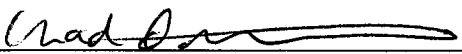
Installation Name: Capital Sand Proppants, LLC

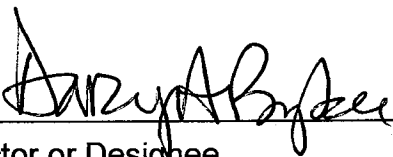
Installation Address: 2605 South Sprigg St, Cape Girardeau, MO 63701

Location Information: Cape Girardeau County, S18, T30N, R14E

Application for Authority to Construct was made for:
New barge terminal facility. 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
Chad Stephenson
New Source Review Unit


Director or Designee
Department of Natural Resources

JUN 0 4 2018

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/>

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."

Capital Sand Proppants, LLC
Cape Girardeau County, S18, T30N, R14E

1. Annual PM₁₀ Emission Limit
 - A. Capital Sand Proppants, LLC shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from the entire installation while operating at this site.

Table 1: Installation Emission Points

Emission Point	Description
EP-01	Truck Unloading into Hopper 1
EP-02	Hopper to Conveyor 1
EP-03	Conveyor 1 to Scalping Screen
EP-04	Scalping Screen
EP-05	Conveyor 2 to Barge Conveyor
EP-06	Barge Conveyor to Barge
EP-07	Haul Road

- B. Capital Sand Proppants, LLC 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. Documented Haul Road Watering
 - A. Capital Sand Proppants, LLC shall control dust from all haul roads at this site using water or surfactant spray consistently and correctly at all times to prevent visible fugitive emissions from entering the ambient air beyond the property boundary. The following conditions apply to haul road watering:
 - 1) The water application rate shall be 100 gallons per 1000 square feet at least once every day.
 - 2) A quarter inch or more rainfall during the preceding 24 hours shall substitute for one daily water application
 - 3) Water/surfactant application shall not be required when the ground is frozen or when there will be no traffic on the roads.

SPECIAL CONDITIONS:

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

- B. Capital Sand Proppants, LLC shall keep the following records on file and available for inspection:
 - 1) A daily log initialed by the responsible facility operator of roads watered and quantity of water/chemical application used, or notation that there was a quarter inch or greater rainfall within the past 24 hours or that the facility was not in operation.
 - 2) Water tank size, total area of roads to be watered, and the resultant number of fills necessary to accomplish the required application rate.
 - 3) Records of watering equipment breakdowns and repairs.

- 3. Record Keeping and Reporting Requirements
 - A. Capital Sand Proppants, LLC shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

 - B. Capital Sand Proppants, LLC shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2017-10-053
Installation ID Number: 031-0139
Permit Number: 06 2018 - 001

Installation Address:
Capital Sand Proppants, LLC
2605 South Sprigg St
Cape Girardeau, MO 63701

Parent Company:
Capital Sand Proppants, LLC
P.O. Box 104990
Jefferson City, MO 65110

Cape Girardeau County, S18, T30N, R14E

REVIEW SUMMARY

- Capital Sand Proppants, LLC has applied for authority to operate a new barge terminal facility.
- The application was deemed complete on November 9, 2017.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment. Documented haul road watering is being used to control the PM, PM₁₀, and PM_{2.5} emissions from the haul road
- 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 and PM_{2.5} are conditioned below the de minimis level by the voluntary production limit. Potential emissions PM are above de minimis levels but below the major source level.
- This installation is located in Cape Girardeau 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.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION/PROJECT DESCRIPTION

This project is for a new barge terminal facility that will be located on the Mississippi River in Cape Girardeau, Missouri. The barge terminal will be used to load sand from Capital Sand's Jackson facility and will consist of truck unloading, several conveyors, a scalping screen, and a barge loadout. The emission points are defined in Table 1. The power at the barge terminal will be via electric grid.

There will be one haul road that is approximately 1,040 feet long. Documented watering is being used to control fugitive dust emissions from the haul road and a control efficiency of 90% for PM and PM₁₀ was used and 74% for PM_{2.5}. According to Capital Sand Proppant, LLC the facility will be capable of loading 510 tons per hour of sand. This is based on the rated capacity of the scalping screen.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition:

- Section 11.19.1 "*Sand & Gravel Processing*," November 1995
- Section 11.19.2 "*Crushed Stone Processing and Pulverized Mineral Processing*," August 2004
- Section 13.2.2 "*Unpaved Roads*," November 2006

Documented haul road watering will be used to control particulate emissions from the haul roads. A 90% control efficiency for PM and PM₁₀ and a 74% control efficiency for PM_{2.5} are applied to the emission calculations for the haul roads areas for documented watering.

A 3.7% control efficiency for PM and PM₁₀ and a 1.5% control efficiency for PM_{2.5} were applied to the uncontrolled emission factors of sources (EP-02, EP-03, EP-05 and EP-06) that will be controlled by an enclosure. Enclosed structures will be located at transfer points of the specified conveyors. The enclosed structures were described as hooded transfer points that are constructed of metal that surrounds the head of the conveyor and the transfer point of the receiving equipment (e.g. tail of a conveyor).

The following table provides an emissions summary for this project. There are no existing potential or actual emissions since this is a new installation. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Conditioned potential emissions account for a voluntary PM₁₀ de minimis limit.

Table 2: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Potential Emissions of the Application	Project Conditioned Potential
PM	25.0	107.58	45.43
PM ₁₀	15.0	35.52	<15.0
PM _{2.5}	10.0	5.78	2.44
SO _x	40.0	N/A	N/A
NO _x	40.0	N/A	N/A
VOC	40.0	N/A	N/A
CO	100.0	N/A	N/A
GHG (CO ₂ e)	N/A	N/A	N/A
GHG (mass)	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A

N/A = Not Applicable

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 and PM_{2.5} are conditioned below the de minimis level by the voluntary production limit. Potential emissions PM are above de minimis levels but below the major source level.

APPLICABLE REQUIREMENTS

Capital Sand Proppants, LLC 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

- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050
- *Submission of Emission Data, Emission Fees and Process Information*,

- 10 CSR 10-6.110
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *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

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the 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*, 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, 2017, received October 27, 2017, designating Capital Sand Proppants, LLC as the owner and operator of the installation.

Attachment A: PM₁₀ Annual Emissions Tracking Sheet

Capital Sand Proppants, LLC 031-0139

Project Number: 2017-10-053

Permit Number: 062018-001

This sheet covers the period from _____ to _____ (Copy as needed)
 (Month, Day Year) (Month, Day 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>	50,000	0.0159	796	0.40	<i>0.40 + previous 11 months</i>
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			
		0.0159			

¹ Multiply the monthly production by the emission factor.
² Divide the monthly emissions (lbs) by 2,000.
³ Add 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	Mgal1,000 gallons
°Fdegrees Fahrenheit	MWmegawatt
acfmactual cubic feet per minute	MHDRmaximum hourly design rate
BACTBest Available Control Technology	MMBtuMillion British thermal units
BMPsBest Management Practices	MMCFmillion cubic feet
BtuBritish thermal unit	MSDSMaterial Safety Data Sheet
CAMCompliance Assurance Monitoring	NAAQSNational Ambient Air Quality Standards
CASChemical Abstracts Service	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CEMSContinuous Emission Monitor System	NO_xnitrogen oxides
CFRCode of Federal Regulations	NSPSNew Source Performance Standards
COcarbon monoxide	NSRNew Source Review
CO₂carbon dioxide	PMparticulate matter
CO_{2e}carbon dioxide equivalent	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
COMSContinuous Opacity Monitoring System	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CSRCode of State Regulations	ppmparts per million
dscfdry standard cubic feet	PSDPrevention of Significant Deterioration
EIQEmission Inventory Questionnaire	PTEpotential to emit
EPEmission Point	RACTReasonable Available Control Technology
EPAEnvironmental Protection Agency	RALRisk Assessment Level
EUEmission Unit	SCCSource Classification Code
fpsfeet per second	scfmstandard cubic feet per minute
ftfeet	SDSSafety Data Sheet
GACTGenerally Available Control Technology	SICStandard Industrial Classification
GHGGreenhouse Gas	SIPState Implementation Plan
gpmgallons per minute	SMALScreening Model Action Levels
grgrains	SO_xsulfur oxides
GWPGlobal Warming Potential	SO₂sulfur dioxide
HAPHazardous Air Pollutant	SSMStartup, Shutdown & Malfunction
hrhour	tphtons per hour
hphorsepower	tpytons per year
lbpound	VMTvehicle miles traveled
lbs/hrpounds per hour	VOCVolatile Organic Compound
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	