

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: **012015-003**

Project Number: 2014-08-047
Installation ID 201-0132

Parent Company: Capital Sand Terminals, LLC

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

Installation Name: Capital Sand Terminals, LLC - Scott City

Installation Address: 308 Tower Rock Road, Scott City, MO 63780

Location Information: Scott County, S27, T30N, R14E

Application for Authority to Construct was made for:
The installation of a sand river terminal load-out 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.

JAN 22 2015

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 startup 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 startup 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.	2014-08-047

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."

1. Haul Road and Vehicular Activity Area Controls Requirement
Capital Sand Terminals, LLC - Scott City shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing one of the following:
 - A. Application of Chemical Dust Suppressants
 - 1) The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - 2) 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 facility is operating.
 - 3) 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.
 - B. Application of Water-Documented Daily
 - 1) 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.
 - 2) Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - 3) 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.
 - 4) 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 rational for not watering (e.g. freezing conditions or not operating).
 - 5) The operator shall keep these records with the facility for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.
2. Primary Equipment Requirement

Page No.	4
Permit No.	
Project No.	2014-08-047

SITE SPECIFIC SPECIAL CONDITIONS:

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

Capital Sand Terminals, LLC - Scott City shall utilize a drive over hopper (EP-1) to transport all sand to the loading barge. Bypassing the drive over hopper is prohibited.

3. Product Handling

Capital Sand Terminals, LLC - Scott City shall only handle sand and aggregate products. Handling other products is prohibited.

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

Project Number: 2014-08-047
Installation ID Number: 201-0132
Permit Number:

Capital Sand Terminals, LLC - Scott City
308 Tower Rock Road
Scott City, MO 63780

Complete: August 25, 2014

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

Scott County, S27, T30N, R14E

PROJECT DESCRIPTION

Capital Sand Terminals, LLC has submitted an Application for Authority to Construct for the installation of a sand river terminal load-out facility. The facility will be used to load sand into river barges at 520 tons per hour. Trucks filled with sand will enter the site and travel on the 590 foot haul road. These trucks will unload dry sand onto the drive over hopper (KPI-JCI Model 2148-50LP). From the hopper, sand will be loaded onto a Superior telestacker conveyor. From there, it will be loaded onto a Masaba conveyor via a barge hopper. From this conveyor, sand will be loaded onto a barge.

The facility's conveyors have a maximum throughput of 1000 tons per hour, but the bottleneck of the process is the rate sand trucks can be unloaded at the river terminal load-out facility. The maximum each truck can unload is 26 tons of sand in three minutes onto the drive over hopper. In a worst case scenario, the facility could handle 20 trucks in one hour, resulting in a maximum throughput of 520 tons per hour.

The facility will not use any control devices on sand handling. However, the facility will control particulate emissions from haul roads and vehicular activity areas by applying water or chemical dust suppressants. The facility will be powered by electricity by the local utility company. Because the uncontrolled potential emissions of this project are above de minimis levels, a construction permit is required. This installation is located in Scott 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 Capital Sand Terminals, LLC - Scott City from the Air Pollution Control Program.

TABLES

The table below summarizes the emissions of this project. The uncontrolled potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year) without controlling emissions from the haul road and vehicular activity area. The controlled potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year) with the use of control practices on the site's haul road and vehicular activity area emissions.

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Uncontrolled Potential Emissions of the Application	Existing Actual Emissions	^b Controlled Potential Emissions of the Application
PM	25.0	182.23	N/A	43.27
PM ₁₀	15.0	55.27	N/A	14.25
PM _{2.5}	10.0	5.52	N/A	4.13
SO _x	40.0	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A

N/A = Not Applicable

^a Uncontrolled potential emissions of the application includes all emission sources of this application without controlling emissions from the haul road and vehicular activity area

^b Controlled potential emissions of the application includes all emission sources of this application with the use of control practices on the site's haul road and vehicular activity area emissions

EMISSIONS CALCULATIONS

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 sand handling equipment were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The uncontrolled emission factors were used because the inherent moisture content of the sand is less than 1.5% by 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 for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} were applied to the emission calculations for the use of water or chemical dust suppressants on the site's haul road. The moisture content of the aggregate is 0.7% by weight.

APPLICABLE REQUIREMENTS

Capital Sand Terminals, LLC - Scott City 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

- None of the NSPS regulations apply to the installation. 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" does not apply to the equipment per §60.670(a)(2) because a crusher is not used with this plant.
- None of the NESHAPS or MACT regulations apply 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. Potential emissions of PM₁₀ are conditioned below the de minimis level and potential emissions of PM are above the de minimis level, but below major source levels.

Daronn Williams
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 August 19, 2014, received August 22, 2014, designating Capital Sand Terminals, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

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

Mr. Steve Bohlkin
President
Capital Sand Terminals, LLC - Scott City
P. O. Box 104990
Jefferson City, MO 65110

RE: New Source Review Permit - Project Number: 2014-08-047

Dear Mr. Bohlkin:

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 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 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, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, phone: (573) 751-2422, fax: (573) 751-5018, website: www.aa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. 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 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: 2014-08-047

Permit Number: