



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: 062013-005

Project Number: 2013-04-041
Installation Number: 510-0016

Parent Company: J. D. Streett & Company, Inc.

Parent Company Address: 144 Weldon Parkway, Maryland Heights, MO 63043

Installation Name: J. D. Streett & Company, Inc.

Installation Address: 3800 South 1st Street, St. Louis, MO 63118

Location Information: St. Louis City

Application for Authority to Construct was made for:
Increased fuel handling. This review was conducted in accordance with Section (5) of 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.

JUN 10 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 these air contaminant sources. 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 these air contaminant sources.

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 sources(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.	2013-04-041

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(12)(A)10. "Conditions required by permitting authority."

J. D. Strett & Company, Inc.
St. Louis City

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permits 03-01-003 and 97-04-028 issued by the City of St. Louis Division of Air Pollution Control.
2. **Control Device Requirement – Activated Carbon Adsorption Systems**
 - A. J. D. Strett & Company, Inc. shall control VOC emissions from the gasoline bays of EP-01 Truck Loading Rack #1 and EP-02 Truck Loading Rack #2 using an activated carbon adsorption system.
 - B. The activated carbon adsorption system shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. J. D. Strett & Company, Inc. shall maintain a copy of the activated carbon adsorption system manufacturer's specifications on site.
 - D. J. D. Strett & Company, Inc. shall maintain an operating and maintenance log for the activated carbon adsorption system 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.

Page No.	4
Permit No.	
Project No.	2013-04-041

SPECIAL CONDITIONS:

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

3. **Record Keeping and Reporting Requirements**
J. D. Streett & Company, Inc. 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. These records shall include MSDS for all materials used/handled.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2013-04-041
Installation ID Number: 510-0016
Permit Number:

J. D. Streett & Company, Inc.
3800 South 1st Street
St. Louis, MO 63118

Complete: May 1, 2013

Parent Company:
J. D. Streett & Company, Inc.
144 Weldon Parkway
Maryland Heights, MO 63043

St. Louis City

REVIEW SUMMARY

- J. D. Streett & Company, Inc. has applied for authority to increase fuel handling through their existing fuel tanks and truck loading racks.
- HAP emissions are expected from the proposed equipment. HAP of concern from the installation are Toluene (108-88-3), Xylene (1330-20-7), Hexane (110-54-3), Ethylbenzene (100-41-4), Cumene (98-82-8), Naphthalene (91-20-3), and Benzene (71-43-2) from the handling of gasoline and denatured ethanol.
- 40 CFR Part 60, Subpart Kb - *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984* does not apply to the installation. EP-19 25,000 gallon Biodiesel/Soy Oil VFRT, EP-20 30,000 gallon Denatured Ethanol VFRT #17, and EP-21 30,000 gallon Denatured Ethanol VFRT #18 are not subject to this regulation while holding the specified contents. MSDS for the biodiesel/soy oil lists the vapor pressure as 2 mmHg (0.267 kPa). MSDS for the denatured ethanol lists the vapor pressure as 40 mmHg (5.34 kPa). §60.110b(a) states that tanks of this size are not subject if their maximum true vapor pressure is less than 15.0 kPa.
- 40 CFR Part 60, Subpart XX - *Standards of Performance for Bulk Gasoline Terminals* does not apply to the installation. The loading racks at this installation were constructed in 1973 and have not since been modified or reconstructed.
- 40 CFR Part 63, Subpart R – *National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)* does not apply to the installation. The installation is an area source of HAP.

- 40 CFR Part 63, Subpart BBBBBB – *National Emission Standards for HAP for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities* is applicable to EP-01 and EP-02 Truck Loading Racks (note: only the gasoline/ethanol bays are subject, the diesel bay is not required to comply with this regulation) and EP-03, EP-05, EP-07, EP-08, and EP-09 Gasoline Storage Tanks.
- The permittee operates an activated carbon adsorption system on their gasoline loading bays to meet 10 CSR 10-5.220(3)(B)2.A which limits their VOC emissions from these bays to 10 mg/L (note: the installation is also required to operate the activated carbon adsorption system by 40 CFR Part 63, Subpart BBBBBB to achieve 80 mg/L TOC).
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*. Potential emissions of VOC are below de minimis levels, but above the 2.75 lb/hr VOC insignificance level in 10 CSR 10-6.061(3)(A)3.A.
- This installation is located in St. Louis City County, a nonattainment area for the eight-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants.
- This installation is a Named Installation per 10 CSR 10-6.020(3)(B), Table 2 Item #22 *Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels*. The installation's major source level is 100 tons per year and fugitive emissions are counted toward major source applicability.
- Emissions testing is not required for the equipment. The installation conducted testing on the activated carbon adsorption system April 29, 2009. The system achieved 2.12 mg/L VOC.
- A Basic Operating Permit application is required for this installation within 30 days of permit issuance.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

J.D Streett & Company, Inc. is a gasoline, ethanol, diesel, and fuel additive distributor. Product is received by pipeline and trucked out. Table 1 contains an emission unit list for the entire installation.

Table 1: Plantwide Emission Unit List

Emission Unit	Description	Construction Date
EP-01	Truck Loading Rack #1	1973
EP-02	Truck Loading Rack #2	1973
EP-03	2,368,000 gallon Gasoline IFRT #3	1970
EP-04	2,310,000 gallon Diesel IFRT #4	1973
EP-05	3,360,000 gallon Gasoline IFRT #1	1970
EP-06	3,360,000 gallon Diesel VFRT #7	Prior to June 1973
EP-07	2,310,000 gallon Gasoline IFRT #2	1970
EP-08	3,360,000 gallon Gasoline IFRT #6	Prior to June 1973
EP-09	3,360,000 gallon Gasoline IFRT #5	1970
EP-10	30,000 gallon Denatured Ethanol VFRT #8	1980
EP-11	30,000 gallon Denatured Ethanol VFRT #9	1980
EP-12	5,000 gallon Fuel Additive HFRT #10	1970
EP-13	10,000 gallon Fuel Additive VFRT #11	1994
EP-14	10,000 gallon Fuel Additive VFRT #13	1994
EP-18	8,500 gallon Fuel Additive VFRT #15	1973
EP-19	25,000 gallon Biodiesel/Soy Oil VFRT #16	2009
EP-20	30,000 gallon Denatured Ethanol VFRT #17	2011
EP-21	30,000 gallon Denatured Ethanol VFRT #18	2011

Note: The installation has not operated their barge loading operation (EP-16) in over five years; therefore, the installation will need to obtain a construction permit if they plan to conduct barge loading in the future. Vertical fixed roof tanks #12 (EP-15) and #14 (EP-17) are also currently inactive; therefore, the permittee may need to obtain a construction permit prior to using these tanks in the future.

The following New Source Review permits have been issued to J. D. Streett & Company, Inc. by the City of St. Louis Division of Air Pollution Control:

Table 2: Permit History

Permit Number	Description
97-04-028	Allowed for the installation of ethanol storage tanks
03-01-003	Replaced and modified the throughput limitations of 97-04-028

PROJECT DESCRIPTION

Permit 03-01-003 contained fuel handling limits for gasoline, diesel, ethanol, and fuel additives. The installation has requested to increase those fuel handling limits. During review of this project it was determined that no fuel handling limits are necessary as the installation is bottlenecked by their loading rack capacity.

EP-01 Truck Loading Rack #1 and EP-02 Truck Loading Rack #2 each contain two bays, for a total of four bays at the installation. The installation operates three gasoline/ethanol bays and one diesel bay. Each bay can handle a maximum of three trucks per hour with the gasoline/ ethanol trucks each having a capacity of 8,600 gallons and the diesel trucks each having a capacity of 7,500 gallons. The combined maximum hourly design rate of the three gasoline/ethanol loading bays is 77,400 gal/hr (69,660 gal/hr of gasoline and 7,740 gal/hr of ethanol). The combined maximum hourly design rate of the diesel bay is 67,500 gal/hr of diesel. These bottlenecked maximum hourly rates for gasoline, ethanol, and diesel were used to calculate the maximum working losses from the installation's storage tanks.

EMISSIONS/CONTROLS EVALUATION

VOC emissions from the gasoline loading bays were calculated using the stack tested VOC emission rate of 2.12 mg/L. HAP emissions from gasoline loading were calculated by multiplying the VOC emission factor by the maximum HAP contents listed in the MSDS provided by the installation for their gasoline. Table 3 contains the maximum HAP contents as listed in the gasoline MSDS.

Table 3: Gasoline MSDS Maximum HAP Contents (wt%)

Hexane (110-54-3)	Benzene (71-43-2)	Toluene (108-88-3)	Xylene (1330-20-7)	Ethylbenzene (100-41-4)	Cumene (98-82-8)	Naphthalene (91-20-3)	HAP
8	1.3	20	18	4	4	2	57.3

Potential emissions from ethanol and diesel loading were calculated using Equation 1 from AP-42's Section 5.2.2.1.1 "Loading Losses" (July 2008) and the following variables:

Table 4: Loading Loss Variables

Material	Saturation Factor, S	True Vapor Pressure, P ¹ (psia)	Molecular Weight, M (lb/lb-mole)	Temperature, T (°F)
Ethanol	0.6 Submerged Loading	0.619	46.07	ambient
Diesel		0.0065	130	

¹The true vapor pressures were obtained from AP-42 Tables 7.1-2 and 7.1-3 for 60°F as TANKS 4.0.9d lists the average ambient air temperature for St. Louis, MO as 56.0333°F.

VOC emissions from the tanks at the installation were evaluated used TANKS 4.0.9d. HAP emissions from gasoline storage were calculated by multiplying the VOC emission factor by the maximum HAP contents from the gasoline MSDS.

Table 5 provides an emissions summary for this project. Existing potential emissions from the installation were calculated as part of this project. Existing actual emissions were taken from the installation's 2011 EIQ. New installation potential emissions represents the bottlenecked potential of the entire installation, assuming continuous operation (8760 hours per year).

Table 5: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential	Existing Actual Emissions (2011 EIQ)	New Installation Potential
PM	25.0	N/A	-	N/A
PM ₁₀	15.0	N/A	-	N/A
PM _{2.5}	10.0	N/A	-	N/A
SO _x	40.0	N/A	-	N/A
NO _x	40.0	N/A	-	N/A
VOC	40.0	46.46	30.85	62.70
CO	100.0	N/A	-	N/A
GHG (CO ₂ e)	100,000	N/A	-	N/A
HAP	25.0	20.72	-	22.75
Toluene (108-88-3)	10.0 ¹	7.23	-	7.94
Xylene (1330-20-7)	10.0 ¹	6.51	-	7.15
Hexane (110-54-3)	10.0 ¹	2.89	-	3.18
Cumene (98-82-8)	10.0 ¹	1.45	-	1.59
Ethylbenzene (100-41-4)	10.0 ¹	1.45	-	1.59
Naphthalene (91-20-3)	10.0 ¹	0.72	-	0.79
Benzene (71-43-2)	10.0 ²	0.47	-	0.52

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

¹This value represents both the major source level and the SMAL.

²The SMAL for Benzene (71-43-2) is 2.0 tpy.

Prior to this permit the installation's potential emissions of VOC were listed as being below de minimis levels; therefore, the installation was not required to obtain an operating permit. After this project, potential plantwide emissions of VOC are 62.70 tpy; therefore, the installation is required to apply for a Basic Operating Permit no later than 30 days after issuance of this permit.

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 VOC are below *de minimis* levels, but above the 2.75 lb/hr VOC insignificance level in 10 CSR 10-6.061(3)(A)3.A.

APPLICABLE REQUIREMENTS

J. D. Streett & Company, Inc. 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

- 10 CSR 10-6.065 *Operating Permits*
 - A Basic Operating Permit application is due within 30 days of permit issuance.
- 10 CSR 10-6.110 *Submission of Emission Data, Emission Fees and Process Information*
- 10 CSR 10-6.165 *Restriction of Emission of Odors*
- 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*
- 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*

SPECIFIC REQUIREMENTS

- 10 CSR 10-5.220 *Control of Petroleum Liquid Storage, Loading, and Transfer*
- 10 CSR 10-6.075 *Maximum Achievable Control Technology Regulations*
 - 40 CFR Part 63, Subpart BBBBBB – *National Emission Standards for HAP for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*, I recommend this permit be granted with special conditions.

Alana L. Rugen, EIT
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 10, 2013, received April 15, 2013, designating J. D. Streett & Company, Inc. 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	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	
CFR	Code of Federal Regulations	National Emissions Standards for Hazardous Air Pollutants
CO	carbon monoxide	NO_x	nitrogen oxides
CO₂	carbon dioxide	NSPS	New Source Performance Standards
CO_{2e}	carbon dioxide equivalent	NSR	New Source Review
COMS	Continuous Opacity Monitoring System	PM	particulate matter
CSR	Code of State Regulations	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
dscf	dry standard cubic feet	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
EQ	Emission Inventory Questionnaire	ppm	parts per million
EP	Emission Point	PSD	Prevention of Significant Deterioration
EPA	Environmental Protection Agency	PTE	potential to emit
EU	Emission Unit	RACT	Reasonable Available Control Technology
fps	feet per second	RAL	Risk Assessment Level
ft	feet	SCC	Source Classification Code
GACT	Generally Available Control Technology	scfm	standard cubic feet per minute
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		

Mr. Mike Bramell
Terminal Manager
J. D. Streett & Company, Inc.
3800 South 1st Street
St. Louis, MO 63118

RE: New Source Review Permit - Project Number: 2013-04-041

Dear Mr. Bramell:

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 submittal of a basic operating 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 Alana Rugen, 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:arl

Enclosures

c: St. Louis Regional Office
PAMS File: 2013-04-041

Permit Number: