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.
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. Streett & 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

   B. The activated carbon adsorption system shall be operated and maintained in accordance with the manufacturer’s specifications.

   C. J. D. Streett & Company, Inc. shall maintain a copy of the activated carbon adsorption system manufacturer’s specifications on site.

   D. J. D. Streett & 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.
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.
J. D. Streett & Company, Inc. Complete: May 1, 2013
3800 South 1st Street
St. Louis, MO 63118

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.

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

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

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

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-04-028</td>
<td>Allowed for the installation of ethanol storage tanks</td>
</tr>
<tr>
<td>03-01-003</td>
<td>Replaced and modified the throughput limitations of 97-04-028</td>
</tr>
</tbody>
</table>

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%)

<table>
<thead>
<tr>
<th></th>
<th>Hexane (110-54-3)</th>
<th>Benzene (71-43-2)</th>
<th>Toluene (108-88-3)</th>
<th>Xylene (1330-20-7)</th>
<th>Ethylbenzene (100-41-4)</th>
<th>Cumene (98-82-8)</th>
<th>Naphthalene (91-20-3)</th>
<th>HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAP</td>
<td>8</td>
<td>1.3</td>
<td>20</td>
<td>18</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>57.3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Material</th>
<th>Saturation Factor, S</th>
<th>True Vapor Pressure, P¹ (psia)</th>
<th>Molecular Weight, M (lb/lb-mole)</th>
<th>Temperature, T (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>0.6 Submerged Loading</td>
<td>0.619</td>
<td>46.07</td>
<td>ambient</td>
</tr>
<tr>
<td>Diesel</td>
<td>0.0065</td>
<td>130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Regulatory De Minimis Levels</th>
<th>Existing Potential</th>
<th>Existing Actual Emissions (2011 EIQ)</th>
<th>New Installation Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>10.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>40.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>40.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>46.46</td>
<td>30.85</td>
<td>62.70</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG (CO$_2$e)</td>
<td>100,000</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>HAP</td>
<td>25.0</td>
<td>20.72</td>
<td>-</td>
<td>22.75</td>
</tr>
<tr>
<td>Toluene (108-88-3)</td>
<td>10.0$^1$</td>
<td>7.23</td>
<td>-</td>
<td>7.94</td>
</tr>
<tr>
<td>Xylene (1330-20-7)</td>
<td>10.0$^1$</td>
<td>6.51</td>
<td>-</td>
<td>7.15</td>
</tr>
<tr>
<td>Hexane (110-54-3)</td>
<td>10.0$^1$</td>
<td>2.89</td>
<td>-</td>
<td>3.18</td>
</tr>
<tr>
<td>Cumene (98-82-8)</td>
<td>10.0$^1$</td>
<td>1.45</td>
<td>-</td>
<td>1.59</td>
</tr>
<tr>
<td>Ethylbenzene (100-41-4)</td>
<td>10.0$^1$</td>
<td>1.45</td>
<td>-</td>
<td>1.59</td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
<td>10.0$^1$</td>
<td>0.72</td>
<td>-</td>
<td>0.79</td>
</tr>
<tr>
<td>Benzene (71-43-2)</td>
<td>10.0$^1$</td>
<td>0.47</td>
<td>-</td>
<td>0.52</td>
</tr>
</tbody>
</table>

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

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

$^2$The 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

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

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.
APPENDIX A

Abbreviations and Acronyms

% ............ percent
°F ............ degrees Fahrenheit
acfm ........ actual cubic feet per minute
BACT ...... Best Available Control Technology
BMPs ...... Best Management Practices
Btu .......... British thermal unit
CAM ...... Compliance Assurance Monitoring
CAS ........ Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR ......... Code of Federal Regulations
CO .......... carbon monoxide
CO₂ ........ carbon dioxide
CO₂e ...... carbon dioxide equivalent
COMS ..... Continuous Opacity Monitoring System
CSR ........ Code of State Regulations
dscf ......... dry standard cubic feet
EIQ ........ Emission Inventory Questionnaire
EP ............ Emission Point
EPA ......... Environmental Protection Agency
EU ............ Emission Unit
fps ........... feet per second
ft ............ feet
GACT ..... Generally Available Control Technology
GHG ......... Greenhouse Gas
gpm ........ gallons per minute
gr .......... grains
GWP ...... Global Warming Potential
HAP ...... Hazardous Air Pollutant
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
MMBtu .... Million British thermal units
MMCF ...... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS ... National Ambient Air Quality Standards
NESHAPs .......... National Emissions Standards for Hazardous Air Pollutants
NOₓ ........ nitrogen oxides
NSPS ...... New Source Performance Standards
NSR .......... New Source Review
PM .......... particulate matter
PM₂.₅ ...... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ ...... particulate matter less than 10 microns in aerodynamic diameter
ppm ........ parts per million
PSD ......... Prevention of Significant Deterioration
PTE ........ potential to emit
RACT ...... Reasonable Available Control Technology
RAL ........ Risk Assessment Level
SCC ......... Source Classification Code
scfm ......... standard cubic feet per minute
SIC ......... Standard Industrial Classification
SIP ......... State Implementation Plan
SMAL ...... Screening Model Action Levels
SOₓ ......... sulfur oxides
SO₂ ...... sulfur dioxide
tph .......... tons per hour
tpy .......... tons per year
VMT ......... vehicle miles traveled
VOC ......... Volatile Organic Compound
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: