



## 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: 022016 - 011

Project Number: 2015-08-012

Installation Number: 047-0180

Parent Company: L.P.G. Ventures, Inc.

Parent Company Address: 971 North Jefferson Street, Kearney, MO 64060

Installation Name: L.P.G. Ventures, Inc.

Installation Address: 971 North Jefferson Street, Kearney, MO 64060

Location Information: Clay County, S22, T53N, R31W

Application for Authority to Construct was made for:

The installation of a welding and fabrication shop equipment (EU-1), a blasting unit (EU-2), a paint booth (EU-3), a diesel fuel storage tank (EU-4), a propane fuel storage tank (EU-5), a concrete plant (EU-6), a 1.4 mmBtu/hr propane fired boiler (EU-7), and haul roads (EU-8) for transporting the finished products. This source was constructed prior to a receipt of a construction permit from the Missouri Department of Natural Resources. Obtaining this permit is a part of remedial action required by the Missouri Air Pollution Control Program. 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.

*Daronn A. Williams*

Prepared by  
Daronn A. Williams  
New Source Review Unit

*Kendall B. Hale for*

Director or Designee  
Department of Natural Resources

FEB 23 2016

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

L.P.G. Ventures, Inc.  
Clay County, S22, T53N, R31W

1. HAP Emission Limitations
  - A. L.P.G. Ventures, Inc. shall emit less than 0.02 tons of Hexamethylene-diisocyanate (CAS #822-06-0) in any consecutive 12-month period from the coatings and solvents, specifically from the Amershield Cure (Hardener), used in the paintbooth.
  - B. Attachment A or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A.
2. Control Device Requirement-Fabric Filter
  - A. L.P.G. Ventures, Inc. shall control emissions from its paint booth (Emission Unit 3) using a fabric filter as specified in the permit application.
  - B. The fabric filter shall be operated and maintained in accordance with the manufacturer's specifications. The fabric filter 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 fabric filter shall be kept on hand at all times. The fabric filter shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
  - D. L.P.G. Ventures, Inc. shall monitor and record the operating pressure drop across the fabric filter at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - E. L.P.G. Ventures, Inc. shall maintain a copy of the fabric filter manufacturer's performance warranty on site.
  - F. L.P.G. Ventures, Inc. shall maintain an operating and maintenance log for the fabric filter which shall include the following:
    - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and

**SPECIAL CONDITIONS:**

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

- 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. Operational Requirement - Solvent/Ink Cloths
  - A. L.P.G. Ventures, Inc. shall keep the ink solvents and cleaning solutions in sealed containers whenever the materials are not in use. L.P.G. Ventures, Inc. shall provide and maintain suitable, easily read, permanent markings on all inks, solvent and cleaning solution containers used with this equipment.
4. Alternative Coating and Solutions
  - A. When considering using an alternative material in the paint booth that is different than a material listed in the Application for Authority to Construct, L.P.G. Ventures, Inc. shall calculate the potential emissions of volatile organic compounds (VOCs) and each individual HAP in the alternative material using the Safety Data Sheet (SDS) of the new material. If the SDS lists a range for a HAP or VOC content, use the highest value in this range.
  - B. L.P.G. Ventures, Inc. shall seek approval from the Air Pollution Control Program before use of the alternative material in the following cases:
    - 1) If the potential VOC emissions for the alternative material is equal to or greater than 41.57 tpy, or
    - 2) If the potential individual HAP emissions for the alternative material is equal to or greater than the SMAL for any compound listed in Appendix B.
  - C. Attachment B or an equivalent form shall be used to show compliance with Special Condition 4.A and 4.B. L.P.G. Ventures, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
5. Record Keeping and Reporting Requirements
  - A. L.P.G. Ventures, 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 SDS for all materials used.
  - B. L.P.G. Ventures, Inc. shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

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

Project Number: 2015-08-012  
Installation ID Number: 047-0180  
Permit Number:

Installation Address:  
L.P.G. Ventures, Inc.  
971 North Jefferson Street  
Kearney, MO 64060

Parent Company:  
L.P.G. Ventures, Inc.  
971 North Jefferson Street  
Kearney, MO 64060

Clay County, S22, T53N, R31W

REVIEW SUMMARY

- L.P.G. Ventures, Inc. has submitted an Application for Authority to Construct for the installation of welding and fabrication shop equipment (EU-1), a blasting unit (EU-2), a paint booth (EU-3), a diesel fuel storage tank (EU-4), a propane fuel storage tank (EU-5), a concrete plant (EU-6), a 1.4 mmBtu/hr propane fired boiler (EU-7), and haul roads (EU-8) for transporting the finished products. This source was constructed prior to a receipt of a construction permit from the Missouri Department of Natural Resources. Obtaining this permit is a part of remedial action required by the Missouri Air Pollution Control Program.
- The application was deemed complete on September 3, 2015.
- HAP emissions are expected from the proposed equipment. HAP emissions will be generated from the paint booth and propane fired boiler.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- A fabric filter is being used to control the particulate emissions from the paint booth.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. This project's potential VOC emissions are above its 40.0 ton per year de minimis level. Without including the control of the paint booth's fabric filter, this project's potential PM<sub>10</sub> and PM<sub>2.5</sub> emissions are above their respective de minimis level. Including the paint booth's fabric filter, this project's potential PM<sub>10</sub> and PM<sub>2.5</sub> emissions are conditioned below their respective de minimis level.
- This installation is located in Clay 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 conditioned below de minimis levels.
- Emissions testing is not required for the equipment.
- A Basic Operating Permit application is required for this installation within 45 days of the issuance of this permit.
- Approval of this permit is recommended with special conditions.

### INSTALLATION/ PROJECT DESCRIPTION

L.P.G. Ventures, Inc. (L.P.G.) manufactures and refinishes horizontal tanks and manufactures concrete tank piers. This facility is an existing facility that does not have a construction permit from the Missouri Air Pollution Control Program. The facility consists of welding and fabrication shop equipment (EU-1), an Empire PRS-10S Blast and Recovery System (EU-2), a paint booth (EU-3), a diesel fuel storage tank (EU-4), a propane fuel storage tank (EU-5), a concrete plant (EU-6), a 1.4 mmBtu/hr propane fired boiler (EU-7), and haul roads (EU-8) for transporting the finished products. Horizontal tanks are blasted, welded and painted. Concrete piers are manufactured using the concrete plant. New and refurbished tanks and concrete piers are transported off site. The diesel storage tank is used to hold fuel for L.P.G.'s haul trucks. The propane fired boiler provides heat for the office and welding and fabrication shop. The propane fuel storage tank is used to hold fuel for the boiler.

As a result of a compliance inspection, L.P.G. sent in an Application for Authority to Construct to determine if the installation should have obtained a construction permit for the welding and fabrication shop equipment, blasting unit, paint booth, fuel storage tanks, boiler, and product offsite hauling.

L.P.G. purchased a concrete plant that was once owned and operated by Remington Steel, LLC at this same site in January 2011, after Remington Steel, LLC went out of business. The remaining equipment was added to the installation in September 2013. The Missouri Air Pollution Control Program determined that the concrete plant did not require a construction permit (per Project Number 2006-02-079 and Project Number 2011-01-050). A construction permit (Permit Number 082003-014) was issued for the construction of this concrete plant in error as stated in Project Number 2006-02-079. The "no permit required" determination letter (with Project Number 2006-02-079) states that the concrete plant has a potential to emit 7.1 tons of PM<sub>10</sub> per year. However, this was a typographical error and should have stated 6.1 tons of PM<sub>10</sub> per year based on the calculations done during the review of Permit Number 082003-014. This concrete plant is rated at 56 tons per hour, per Permit Number 082003-014.

Because the welding and fabrication shop equipment, blasting unit, paint booth, fuel storage tanks, boiler, and product offsite hauling was constructed or started much later after the concrete plant, these emission sources are considered a separate project from the concrete plant. These emission sources are considered to be a part of this current project.

L.P.G. should have obtained a construction permit prior to constructing these emission sources because the uncontrolled potential VOC, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from these sources exceed their respective de minimis level. Also, the potential emissions of the HAP Hexamethylene-di-isocyanate (CAS #822-06-0) exceed the 0.02 ton per year SMAL. As a result, this permit is being issued as a remedial action.

To avoid modeling requirements for Hexamethylene-di-isocyanate, an emission limit for this HAP was included in this permit.

Besides the construction permit mentioned above that was rescinded, no permits have been issued to L.P.G. from the Air Pollution Control Program.

#### EMISSIONS/CONTROLS EVALUATION

The emission factors for the welding, blasting unit, propane boiler and haul roads used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition. Emissions from the paint booth were calculated using a mass balance approach.

Emissions from welding were calculated using emission factors from AP-42, Section 12.19 "Electric Arc Welding," January 1995. The facility utilizes shielded metal arc welding (SMAW) units with electrode E7018. This emission factor is for PM<sub>10</sub> only. Since an emission factor for PM and PM<sub>2.5</sub> were not given, PM and PM<sub>2.5</sub> emissions were assumed to be equal to PM<sub>10</sub> emissions. L.P.G. has six SMAW units. Each unit can use up to six pounds of electrode per hour, which results in a maximum usage of 36 pounds of electrode per hour.

Emissions from the blasting unit (Empire PRS-10S Blast and Recovery System) were calculated using emission factors from AP-42, Section 13.2.6 "Abrasive Blasting," October 1997. This unit utilizes steel slag and a fabric filter to recover and reuse the blasting media. This unit is designed to only operate with the fabric filter. As a result, the fabric filter was considered an inherent control device during the review of this project. The emission factor for "abrasive blasting of unspecified metal parts, controlled with a fabric filter (SCC 3-09-002-04)" was used. This emission factor is given as total PM. Because an emission factor for PM<sub>10</sub> and PM<sub>2.5</sub> were not available, PM<sub>10</sub> and PM<sub>2.5</sub> emissions were assumed to be equal to PM emissions. Per the specification sheet, this unit has a MHDR of 960 pounds of material per hour.

In the paint booth, L.P.G. uses an airless spraying method. Since the tanks are most similar to a flat surface, a transfer efficiency of 75% was used based on Table 5-7 of APTI's Course 482's Student Manual. A fabric filter will be used to control particulate

matter. As a result, a 95% control efficiency was used for PM, PM<sub>10</sub> and PM<sub>2.5</sub>. The spray gun has a MHDR of 1.2 gallons per min. However, per application, handling the tanks (moving them in, within and out of the paint booth) takes 6 hours per painting cycle, the actual painting takes 4 hours per painting cycle, and drying takes 16 hours per painting cycle. The tanks dry in the paint booth so only one tank can be in the booth at any time. The total painting cycle is 26 hours and a maximum of 12 gallons of paint is used per painting cycle. Due to operational bottlenecks, the MHDR of the paint booth is 0.46 gallons per hour. L.P.G. only has one spray gun at this site.

Emissions from the propane boiler were calculated using emission factors from AP-42, Section 1.5 “Liquefied Petroleum Gas Combustion,” July 2008. The propane boiler has a heat input capacity of 1.4 mmBtu/hr.

Emissions from the fuel storage tanks were calculated using EPA’s TANKS software. Both tanks are located above ground. The diesel tank is an 8,000 gallon horizontal white tank that is 32 feet in length and has a diameter of 6.83 feet. The maximum number of turnovers is six per year and it is not heated. The propane tank is a 18,000 gallon horizontal white tank that is 52 feet long with a diameter of 8 feet. The maximum number of turnovers is one per year and it is not heated.

PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from haul roads were calculated using the predictive equation from AP-42, Section 13.2.2 “Unpaved Roads,” November 2006. Haul roads are a total of 300 feet with a hauling rate of 1.4 tons per hour.

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit Number 082003-014, which just includes emissions from the concrete plant. Potential emissions of the application include emissions from the project’s equipment (the welding and fabrication shop equipment, blasting unit, paint booth, fuel storage tanks, boiler and hauling), assuming continuous operation (8760 hours per year).

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> / SMAL Levels	Existing Potential Emissions	Existing Actual Emissions	Uncontrolled Potential Emissions of the Application <sup>1</sup>	Controlled Potential Emissions of the Application <sup>2</sup>	New Installation-wide Potential Emissions
PM	25.0	N/D	N/A	13.13	6.59	N/D
PM <sub>10</sub>	15.0	6.10	N/A	18.87	6.59	18.69
PM <sub>2.5</sub>	10.0	N/D	N/A	18.97	6.59	N/D
SOx	40.0	N/A	N/A	0.10	0.10	0.10
NOx	40.0	N/A	N/A	0.87	0.87	0.87
VOC	40.0	N/A	N/A	41.57	41.57	41.57
CO	100.0	N/A	N/A	0.50	0.50	0.50
GHG (CO <sub>2</sub> e)	75,000 / 100,000	N/A	N/A	856.01	856.01	856.01
GHG (mass)	0.0 / 100.0 / 250.0	N/A	N/A	837.78	837.78	837.78

Pollutant	Regulatory <i>De Minimis</i> / SMAL Levels	Existing Potential Emissions	Existing Actual Emissions	Uncontrolled Potential Emissions of the Application <sup>1</sup>	Controlled Potential Emissions of the Application <sup>2</sup>	New Installation- wide Potential Emissions
HAPs	10.0/25.0	N/A	N/A	14.62	14.62	14.62
Hexamethylene- di-isocyanate (#822-06-0)	0.02 <sup>a</sup>	N/A	N/A	0.19	0.19	< 0.02
Xylene	10.0	N/A	N/D	0.19	0.19	0.19
Toluene	10.0	N/A	N/D	8.38	8.38	8.38
Methanol	10.0	N/A	N/D	4.19	4.19	4.19
Naphthalene	2.0	N/A	N/D	1.50	1.50	1.50
Chromium Compounds	5.0	N/A	N/D	0.001	0.001	0.001
Cobalt	0.1	N/A	N/D	0.0002	0.0002	0.0002
Mangane Compounds	0.8	N/A	N/D	0.16	0.16	0.16
Nickel Compounds	1.0	N/A	N/D	0.0003	0.0003	0.0003

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

<sup>a</sup> Screening Model Action Level (SMAL) of the HAP

Note 1: Uncontrolled Potential Emissions of the Application does not include the use of the paint booth's fabric filter

Note 2: Controlled Potential Emissions of the Application includes the use of the paint booth's fabric filter

## 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 VOCs from this project are above the 40.0 ton per year de minimis level, but less than the major threshold. The remaining pollutants of this project are conditioned below de minimis levels.

## APPLICABLE REQUIREMENTS

L.P.G. Ventures, 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

## GENERAL REQUIREMENTS

- *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.
- *Operating Permits*, 10 CSR 10-6.065
- *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

- *Control of Emissions From Industrial Surface Coating Operations*  
10 CSR 10-2.230
- *Restriction of Emission of Particulate Matter From Industrial Processes*,  
10 CSR 10-6.400
- *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-6.405

#### 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 September 2, 2015, received September 3, 2015, designating L.P.G. Ventures, Inc. as the owner and operator of the installation.



**Attachment B:  
Potential HAP and VOC Emissions From Alternative Coating and Solutions**

L.P.G. Ventures, Inc.  
Clay County, S22, T53N, R31W  
Project Number: 2015-08-012  
Installation ID Number: 047-0180  
Permit Number:

Coating Name: \_\_\_\_\_ Date: \_\_\_\_\_ Copy this sheet as needed.

A	B	C	D	E	F	G	H	I
Individual HAP Name and CAS No.	HAP is also PM (yes / no)	Individual HAP Content (max weight %)	Maximum Application Rate (lbs coating per hour)	Overall PM Control Efficiency (%)	Individual HAP PTE (tons per year)	Individual HAP SMAL (tons per year)	Coating VOC (weight %)	Coating VOC PTE (tons per year)
<i>Benzene 71-43-2</i>	<i>no</i>	<i>2.0%</i>	<i>0.46</i>	<i>N/A</i>	<i>0.04</i>	<i>2.0</i>	<i>35.65%</i>	<i>0.72</i>
<i>Cobalt 2-Ethylhexanoate 136-52-7</i>	<i>yes</i>	<i>0.5%</i>		<i>98.75%</i>	<i>0.0018</i>	<i>0.1</i>		

- A. Record the all individual HAPs from this single coating SDS.
- B. Compare the HAP to Appendix B for verification as particulate matter.
- C. Record the maximum weight percent of each HAP from the SDS.
- D. The maximum application rate is 0.46 lbs of coating per hour. If the maximum application rate is exceeded, seek approval from the Air Pollution Control Program New Source Review Unit before using this coating.
- E. The overall PM control efficiency includes the transfer efficiency (75%), and exhaust filter control efficiency (95%). The booth capture efficiency was assumed to be 100% because negative pressure is being used and the booth is totally enclosed. [Sample calculation: 75% + (1 - 75%) x 95% = 98.75%]
- F. Calculate the particulate matter HAP potential to emit:  $F = C \times D \times (1 - E) \times 8,760 / 2,000$ . Otherwise calculate the volatile HAP potential to emit:  $F = C \times D \times 8,760 / 2,000$ .
- G. Record the individual HAP SMAL from the most recent Appendix B, also available at <http://www.dnr.mo.gov/env/apcp/permits/constpmtguide.htm> as *Table of Hazardous Air Pollutants, Screening Model Action Levels and Risk Assessment Levels*. If the individual HAP potential to emit is greater than the SMAL seek approval from the Air Pollution Control Program New Source Review Unit before using this coating or solution.
- H. Record or calculate the coating's VOC weight % from the SDS. Verify VOC status according to 10 CSR 10-6.020 *Definitions and Common Reference Tables (2)(V)13*.
- I. Calculate the VOC potential to emit:  $I = D \times H \times 8,760 / 2,000$ . If the VOC potential to emit is greater than 41.57 tons per year seek approval from the Air Pollution Control Program New Source Review Unit before using this coating.

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>m/s</b> .....	meters per second
<b>°F</b> .....	degrees Fahrenheit	<b>Mgal</b> .....	1,000 gallons
<b>acfm</b> .....	actual cubic feet per minute	<b>MW</b> .....	megawatt
<b>BACT</b> .....	Best Available Control Technology	<b>MHDR</b> .....	maximum hourly design rate
<b>BMPs</b> .....	Best Management Practices	<b>MMBtu</b> .....	Million British thermal units
<b>Btu</b> .....	British thermal unit	<b>MMCF</b> .....	million cubic feet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAS</b> .....	Chemical Abstracts Service	<b>NAAQS</b> .....	National Ambient Air Quality Standards
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NESHAPs</b> ..	National Emissions Standards for Hazardous Air Pollutants
<b>CFR</b> .....	Code of Federal Regulations	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO</b> .....	carbon monoxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSR</b> .....	New Source Review
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>PM</b> .....	particulate matter
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>ppm</b> .....	parts per million
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EP</b> .....	Emission Point	<b>PTE</b> .....	potential to emit
<b>EPA</b> .....	Environmental Protection Agency	<b>RACT</b> .....	Reasonable Available Control Technology
<b>EU</b> .....	Emission Unit	<b>RAL</b> .....	Risk Assessment Level
<b>fps</b> .....	feet per second	<b>SCC</b> .....	Source Classification Code
<b>ft</b> .....	feet	<b>scfm</b> .....	standard cubic feet per minute
<b>GACT</b> .....	Generally Available Control Technology	<b>SDS</b> .....	Safety Data Sheet
<b>GHG</b> .....	Greenhouse Gas	<b>SIC</b> .....	Standard Industrial Classification
<b>gpm</b> .....	gallons per minute	<b>SIP</b> .....	State Implementation Plan
<b>gr</b> .....	grains	<b>SMAL</b> .....	Screening Model Action Levels
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		

## Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CARBARYL	63-25-2	10	V	Y	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CARBON DISULFIDE	75-15-0	1		Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CARBON TETRACHLORIDE	56-23-5	1		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
ACETOPHENONE	98-86-2	1		Y	N	CARBONYL SULFIDE	463-58-1	5		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CATECHOL	120-80-9	5		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
ACROLEIN	107-02-8	0.04		Y	N	CHLORAMBEN	133-90-4	1		Y	Y	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N	CHLORDANE	57-74-9	0.01		Y	Y	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
ACRYLIC ACID	79-10-7	0.6		Y	N	CHLORINE	7782-50-5	0.1		N	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
ACRYLONITRILE	107-13-1	0.3		Y	N	CHLOROACETIC ACID	79-11-8	0.1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
AMINOBIPHENYL, [4-]	92-67-1	1	V	Y	N	CHLORO BENZENE	108-90-7	10		Y	N	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
ANILINE	62-53-3	1		Y	N	CHLORO BENZILATE	510-15-6	0.4	V	Y	Y	DIMETHYL PHTHALATE	131-11-3	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CHLOROFORM	67-66-3	0.9		Y	N	DIMETHYL SULFATE	77-78-1	0.1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
ANTIMONY COMPOUNDS		5	H	N	Y	CHLOROPRENE	126-99-8	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	CHROMIUM COMPOUNDS		5	L	N	Y	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	CHRYSENE	218-01-9	0.01	V	Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	COBALT COMPOUNDS		0.1	M	N	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	COKE OVEN EMISSIONS	8007-45-2	0.03	N	Y	N	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
ASBESTOS	1332-21-4	0	A	N	Y	CRESOL, [META-]	108-39-4	1	B	Y	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
BENZENE	71-43-2	2		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	CUMENE	98-82-8	10		Y	N	ETHYL ACRYLATE	140-88-5	1		Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N	ETHYL BENZENE	100-41-4	10		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y	ETHYL CHLORIDE	75-00-3	10		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N	ETHYLENE GLYCOL	107-21-1	10		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N	ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DIAZOMETHANE	334-88-3	1		Y	N	ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
BERYLLIUM SALTS		2E-05	J	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N	ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DIOXINS/FURANS		6E-07	D,V	Y	N	ETHYLENE OXIDE	75-21-8	0.1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DIBENZOFURAN	132-64-9	5	V	Y	N	ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N	FORMALDEHYDE	50-00-0	2		Y	N
BROMOFORM	75-25-2	10		Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N	GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y	GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N	HEPTACHLOR	76-44-8	0.02		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y	HEXACHLOROBENZENE	118-74-1	0.01		Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N	HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N	HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N	HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
CAPROLACTAM (Delisted)	105-60-2					DICHLOROMETHANE	75-09-2	10		N	N	HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
CAPTAN	133-06-2	10		Y	Y	DICHLOROPHENOXYACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y	HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N

## Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N	NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N	TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N	NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N	URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
HEXAMETHYLENE,-1,6-DISOCYANATE	822-06-0	0.02		Y	N	NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N	VINYL ACETATE	108-05-4	1		Y	N
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N	OCTACHLORONAPHTHALENE	2234-13-1	0.01	V	Y	N	VINYL BROMIDE	593-60-2	0.6		Y	N
HEXANE, [N-]	110-54-3	10		Y	N	PARATHION	56-38-2	0.1		Y	Y	VINYL CHLORIDE	75-01-4	0.2		Y	N
HYDRAZINE	302-01-2	0.004		N	N	PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y	XYLENE, [META-]	108-38-3	10	G	Y	N
HYDROGEN CHLORIDE	7647-01-0	10		N	N	PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N	XYLENE, [ORTHO-]	95-47-6	10	G	Y	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N	PENTACHLOROPHENOL	87-86-5	0.7		Y	N	XYLENE, [PARA-]	106-42-3	10	G	Y	N
HYDROQUINONE	123-31-9	1		Y	N	PHENOL	108-95-2	0.1		Y	N	XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N	PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N						
ISOPHORONE	78-59-1	10		Y	N	PHOSGENE	75-44-5	0.1		Y	N						
LEAD COMPOUNDS		0.01	Q	N	Y	PHOSPHINE	7803-51-2	5		N	N						
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N	PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N	Legend					
MALEIC ANHYDRIDE	108-31-6	1		Y	N	PHTHALIC ANHYDRIDE	85-44-9	5		Y	N	Group ID	Aggregate Group Name				
MANGANESE COMPOUNDS		0.8	R	N	Y	POLYCYLIC ORGANIC MATTER		0.01	V	Y	N	A	Asbestos				
MERCURY COMPOUNDS		0.01	S	N	N	PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y	B	Cresols/Cresylic Acid (isomers and mixtures)				
METHANOL	67-56-1	10		Y	N	PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N	C	2,4 - D, Salts and Esters				
METHOXYCHLOR	72-43-5	10	V	Y	Y	PROPIONALDEHYDE	123-38-6	5		Y	N	D	Dibenzofurans, Dibenzodioxins				
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N	PROPOXUR [BAYGON]	114-26-1	10		Y	Y	E	4, 6 Dinitro-o-cresol, and Salts				
METHYL CHLORIDE	74-87-3	10		Y	N	PROPYLENE OXIDE	75-56-9	5		Y	N	F	Lindane (all isomers)				
METHYL ETHYL KETONE (Delisted)	78-93-3					PROPYLENEMINE, [1,2-]	75-55-8	0.003		Y	N	G	Xylenes (all isomers and mixtures)				
METHYL HYDRAZINE	60-34-4	0.06		Y	N	QUINOLINE	91-22-5	0.006		Y	N	H	Antimony Compounds				
METHYL IODIDE	74-88-4	1		Y	N	QUINONE	106-51-4	5		Y	N	I	Arsenic Compounds				
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N	RADIONUCLIDES		Note 1	Y	N	Y	J	Beryllium Compounds				
METHYL ISOCYANATE	624-83-9	0.1		Y	N	SELENIUM COMPOUNDS		0.1	W	N	Y	K	Cadmium Compounds				
METHYL METHACRYLATE	80-62-6	10		Y	N	STYRENE	100-42-5	1		Y	N	L	Chromium Compounds				
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N	STYRENE OXIDE	96-09-3	1		Y	N	M	Cobalt Compounds				
METHYLCYCLOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y	TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y	N	Coke Oven Emissions				
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y	TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N	O	Cyanide Compounds				
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N	TETRACHLOROETHYLENE	127-18-4	10		N	N	P	Glycol Ethers				
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N	TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N	Q	Lead Compounds (except elemental Lead)				
MINERAL FIBERS		0	T	N	Y	TOLUENE	108-88-3	10		Y	N	R	Manganese Compounds				
NAPHTHALENE	91-20-3	10	V	Y	N	TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N	S	Mercury Compounds				
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N	TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N	T	Fine Mineral Fibers				
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N	TOXAPHENE	8001-35-2	0.01		Y	N	U	Nickel Compounds				
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y	TRICHLOROETHANE, [1,2,4-]	120-82-1	10		Y	N	V	Polycyclic Organic Matter				
NICKEL COMPOUNDS		1	U	N	Y	TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N	W	Selenium Compounds				
NICKEL REFINERY DUST		0.08	U	N	Y	TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N	X	Polychlorinated Biphenyls (Aroclors)				
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y	TRICHLOROETHYLENE	79-01-6	10		Y	N	Y	Radionuclides				
NITROBENZENE	98-95-3	1		Y	N	TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N						
NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N	TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N						
NITROPHENOL, [4-]	100-02-7	5		Y	N	TRIETHYLAMINE	121-44-8	10		Y	N	Note 1	The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million				
NITROPROPANE, [2-]	79-46-9	1		Y	N	TRIFLURALIN	1582-09-8	9		Y	Y						

Mr. John Baanders  
President  
L.P.G. Ventures, Inc.  
971 North Jefferson Street  
Kearney, MO 64060

RE: New Source Review Permit - Project Number: 2015-08-012

Dear Mr. Baanders:

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.

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.ao.mo.gov/ahc](http://www.ao.mo.gov/ahc).

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, 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:dws

Enclosures

c: Kansas City Regional Office  
PAMS File: 2015-08-012

Permit Number: