

217/782-2113

FEDERALLY ENFORCABLE STATE OPERATING PERMIT

PERMITTEE

Ferrellgas LP  
d/b/a Blue Rhino of Chicago  
Attn: Robert Myers  
24260 Northern Illinois Drive  
Channahon, Illinois 60410

Application No.: 06100071

I.D. No.: 197420AAI

Applicant's Designation:

Date Received: January 22, 2007

Subject: Paint booth & Flare

Date Issued:

Expiration Date:

Location: 24260 Northern Illinois Drive, Channahon, Will County, 60410

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Spray Coating Booth with Dry Filters  
Propane Cylinder Evacuation Operation with Flare

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
  - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons per year of volatile organic material (VOM)). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
  - ii. To limit the emissions of VOM from the construction of new emission units and other modifications at the source, which occurred without first obtaining construction permit(s) between November 15, 1992 and June 15, 2005 (the period during which the Chicago area was classified as severe nonattainment for ozone), to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification.
  - iii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.

- c. This permit supersedes all operating permits issued for this location.
- 2a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 Ill. Adm. Code 212.321.
- 3. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
- 4a. Pursuant to 35 Ill. Adm. Code 218.204(j)(4)(B), except as provided in 35 Ill. Adm. Code 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with 35 Ill. Adm. Code 218 Subpart F must be demonstrated through the applicable coating analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.211(c) except where noted. (Note: The equation presented in 35 Ill. Adm. Code 218.206 shall be used to calculate emission limitations for determining compliance by add on controls, credits for transfer efficiency, emissions trades and cross line averaging.) The emission limitations are as follows:

Miscellaneous Metal Parts and Products Coating	<u>kg/l</u>	<u>lb/gal</u>
All other coatings	0.34	2.8

- b. Pursuant to 35 Ill. Adm. Code 218.209, no owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 is required to meet the limitations of 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302), after the date by which the coating line is required to meet 35 Ill. Adm. Code 218.204.
- c. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall apply only to photochemically reactive material.
- 5. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart M. The source is not a major source, i.e. is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.
- 6. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- 7a. Emissions and operation of the spray coating booth shall not exceed the following limits:

i. VOM emissions:

<u>Material</u>	<u>Usage</u>		<u>VOM Emissions</u>	
	<u>(Gallons/Mo)</u>	<u>(Gallons/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Liquid Spray Coating	1,590	15,900	2.23	22.26

- ii. These limits define the potential emissions of VOM and are based on maximum material usages and maximum VOM content
- iii. Compliance with the monthly and annual limits for the spray coating booth shall be determined using the following formula:

$$E_d = \sum_{i=1}^n V_i C_i$$

Where:

- $E_d$  = Actual VOM emissions for the day (lbs/month or lb/year);
- $i$  = Subscript denoting a specific coating applied or cleanup solvent used;
- $n$  = Total number of coatings as applied and cleanup solvents used in all lacquer lines at the source;
- $V_i$  = Volume of each coating as applied or cleanup solvent used (gallons/month or gallons/year) "as applied;" and
- $C_i$  = The VOM content of each coating as applied or cleanup solvent used (lbs VOM/gallon). This value shall be determined by multiplying the "as applied" coating density (lbs/gallon) by the "as applied" VOM content (% by weight).

- iv. The above limitations are being established in this permit pursuant to Title I of the CAA, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the VOM emissions from the spray coating booth below the levels that would trigger the applicability of these rules.
- v. This permit is issued based on negligible emissions of particulate matter from the paint booth. For this purpose emissions from this emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

b. Emissions and operation of the propane cylinder evacuation and recovery system with flaring process shall not exceed the following limits:

<u>Propane Evacuated</u> <u>(Lb/Hr)</u>	<u>(Gal/Hr)</u>	<u>Pollutant</u>	<u>Emission</u> <u>Factor</u>	<u>Emissions</u> <u>(Lb/Hr)</u>	<u>(Tons/Yr)</u>
63.75	15.00	CO	0.370 lb/mmBtu	0.01	0.04
		NO <sub>x</sub>	0.068 lb/mmBtu	0.01	0.01
		PM	0.40 lb/10 <sup>3</sup> gal	0.01	0.01
		SO <sub>2</sub>	0.10S lb/10 <sup>3</sup> gal	0.01	0.01
		VOM	0.140 lb/mmBtu	0.01	0.02

These limits are based on 37.5 propane tanks/hour evacuated (0.4 gallons/tank, 1.7 lbs/tank), 2% propane loss from the tanks, a heat content of 90,000 Btu/gal for propane (27,000 Btu/hour to flare), 8,760 hours per year of operation for the propane cylinder evacuation process with flare and standard emission factors (Table 1.5-1, AP-42, Fifth Edition, Volume I, Supplement B, October 1996 and Table 13.5-1, AP-42, Fifth Edition, Volume I, September 1991). S indicates that the sulfur content expressed in gr/100 ft<sup>3</sup> gas vapor should be multiplied by the value given.

- c. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 8. This permit is issued based on the Potential to Emit (PTE) for Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program (CAAPP) Permit and the NESHAP for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart MMMM.
- 9a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
  - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Conditions 10 and 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 10a. Pursuant to 35 Ill. Adm. Code 212.107, for both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR part 60, Appendix A,

except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This Condition shall not apply to 35 Ill. Adm. Code 212.301.

- b. Pursuant to 35 Ill. Adm. Code 212.109, except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.
- c. Pursuant to 35 Ill. Adm. Code 212.110(a), measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E.
- d. Pursuant to 35 Ill. Adm. Code 212.110(b), the volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4.
- e. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
11. Pursuant to 35 Ill. Adm. Code 218.211(a), the VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.211.
12. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5

years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

- 13a. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
  - b. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(2) or (a)(3) and complying by means of 35 Ill. Adm. Code 218.204 shall collect and record all of the following information for each coating line and maintain the information at the source for a period of three years:
    - i. The name and identification number of each coating as applied on each coating line.
    - ii. The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.
- 14a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
  - i. Identification, amount, and VOM/HAP content of each coating used in the spray booths (tons/month, tons/year, and weight % VOM/HAP);
  - ii. Quantity of propane vented to flare based on number of tanks evacuated and/or other operator knowledge (gallons/month and gallons/year); and

- iii. Monthly and annual emissions of CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOM, and HAPs from source with supporting calculations (tons/month and tons/year).
  - b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
15. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- 16a. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- b. Pursuant to 35 Ill. Adm. Code 218.211 (C) (3), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 of and complying by means of 35 Ill. Adm. Code 218.204 shall notify the Illinois EPA in the following instances:
    - i. Any record showing violation of 35 Ill. Adm. Code 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
    - ii. At least 30 calendar days before changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d)(1) or (e)(1), respectively. Upon changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d) or (e), respectively.

17. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

It should be noted that the Shot Blast Booth with filter is exempt from the state permit requirements pursuant to 35 Ill. Adm. Code 201.146(aa) and (jj).

If you have any questions on this permit, please contact George Kennedy at 217/782-2113.

Edwin C. Bakowski, P.E.  
Acting Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

ECB:GMK:psj

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from Ferrell gas LP facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons per year of volatile organic materials (VOM)) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)				
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>
Spray coating booth			0.44		22.26
Propane cylinder evacuation operation with flare	<u>0.04</u>	<u>0.01</u>	<u>0.01</u>	<u>0.01</u>	<u>0.02</u>
Total	0.04	0.01	0.45	0.01	22.28

GMK:psj