

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Phillips Pipe Line Company  
Attn: D. C. Gill, Jr.  
354 Adams Building  
Bartlesville, Oklahoma 74004

Application No.: 73010178

I.D. No.: 091805AAD

Applicant's Designation: KAN DIST T

Date Received: October 19, 2000

Subject: Bulk Terminal

Date Issued:

Expiration Date:

Location: 275 North 2750 West Road, Kankakee

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of four external floating roof storage tanks (Tanks T-151, T-152, T-153, and T-053), nine fixed roof storage tanks (Tanks T-501, T-A1, T-A2, T-A3, T-A4, T-001, T-002, T-003, and T-004), two internal floating roof storage tanks (Tanks T-301 and T-421), two oil-water separators, one propane loading rack, associated pumps, one furnace, six dehydrators, one air stripper with oxidizer, maintenance and cleaning activities, and one truck loading rack equipped with a carbon adsorption vapor recovery unit 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 to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., volatile organic material (VOM) to less than 100 tons/year, combined hazardous air pollutants (HAPs) to less than 25 tons/year, and single hazardous air pollutant (HAP) to less than 10 tons/year). 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.
- 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.
2. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, 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 Permit (CAAPP), and Section 112(G) of the Clean Air Act.

3. Emissions and operation of bulk terminal operations shall not exceed the following limits:

Process	Throughput		Emission Factor (Lb/Gal)	VOM Emissions	
	(Gal/Mo)	(Gal/Yr)		(Lb/Mo)	(Ton/Yr)
Gasoline Storage	65,000,000	520,000,000	0.00008**	5,000	20.00
Distillate Storage	131,500,000	1,052,000,000	0.00001**	750	3.00
Ethanol Storage	2,000,000	10,000,000	0.0002**	400	1.00
Additive Storage	32,540	195,250	0.0005**	17	0.05
Transmix Storage	1,050,000	8,400,000	0.001**	1,063	4.25
Gasoline Blend <sup>#</sup> and/or Gasoline Loadout	16,250,000	120,000,000	0.00067***	10,888	40.2
Fugitive Losses from the Loading Rack from Gasoline/ Gasoline Blend	16,250,000	120,000,000	0.000054*	888	3.24
Distillate Loadout	17,500,000	140,000,000	0.0000095*	167	0.67
Ethanol Loadout	1,250,000	10,000,000	0.00005*	64	0.26
Oil/Water Separators	7,500,000	55,150,000	0.0002	1,500	5.52
Relief Tank	2,250	18,000	0.0125	28	0.11
Wastewater Treatment with Catalytic Oxidizer****	7,500,000	55,000,000	0.00083	623	2.28
				Total:	80.58

# Gasoline blend consists of 90% gasoline and 10% ethanol.

\* Based on standard AP-42 emission factors for uncaptured emissions of VOM with an 90% overall control efficiency for ethanol (0% for distillate) and 98.7% for fugitive losses for the loadout of gasoline/gasoline blend for the following equation:

$$E = \frac{(12.46 * S * P * M) * (1 - EFF)}{(T)}$$

E is the loading loss (lb/1,000 gal)

S is the saturation factor

P is true vapor pressure of the liquid loaded (psia)

M is vapor molecular weight (lb/lb-mole)

T is the temperature of the bulk liquid loaded (°R)

Eff is the overall control efficiency.

\*\* Based on standard AP-42 emission factors for breathing and working losses

\*\*\* Based on emission limits defined in 35 Ill. Adm. Code 215.582

\*\*\*\* Overall control efficiency of 90%

These limits are based on standard AP-42 emission factors and the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

4. Emissions and operation of one furnace shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Propane Usage</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>Factor</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
One Furnace	2,500	17,000	NO <sub>x</sub>	0.014	35	0.12
			CO	0.0019	4.75	0.02
			TSP	0.0004	1	0.01
			VOM	0.0005	1.25	0.01
			SO <sub>2</sub>	0.00015	0.375	0.01

These limits are based on standard AP-42 emission factors, sulfur content of 15 gr/100 ft<sup>3</sup>, propane as the only fuel fired in the furnaces and the information as provided by the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

5. Emissions and operation of 6 dehydrators shall not exceed the following limits:

<u>Process</u>	<u>Number of Cycles</u>	<u>VOM Emission Factor</u>	<u>VOM Emissions</u>		
	<u>(#/Mo)</u>	<u>(#/Yr)</u>	<u>(Lb/Regeneration)</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Regeneration	6	50	178.2	1,069.2	4.46

These limits are based on standard emission determination methods and the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

6. Emissions of VOM from fugitive losses (pumps, valves, seals, etc.), meter proving, maintenance activities, tank cleaning and filters shall not exceed 10.5 ton/yr.
7. Emissions of VOM from propane operations shall not exceed 4.25 ton/yr.
8. Pursuant to 35 Ill. Adm. Code 215.123 (b), the owner or operator of the 4 external floating roof storage tanks and 2 internal floating roof storage tanks shall not cause or allow the storage of any volatile petroleum liquid in the tank unless:
- a. The tank is equipped with one of the vapor loss control devices specified in 35 Ill. Adm. Code 215.121(b).
  - b. There are no visible holes, tears or other defects in the seal or any seal fabric or material of any floating roof.

- c. All openings of any floating roof deck, except stub drains, are equipped with covers, lids or seals such that:
    - i. The cover, lid or seal is in the closed position at all times except when petroleum liquid is transferred to or from the tank;
    - ii. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
    - iii. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
  - d. Routine inspections of floating roof seals are conducted through roof hatches once every six months.
  - e. A complete inspection of the cover and seal of any floating roof tank is made whenever the tank is emptied for reasons other than the transfer of petroleum liquid during the normal operation of the tank, or whenever repairs are made as a result of any semiannual inspection or incidence of roof damage or defect.
  - f. A record of the results of each inspection conducted under 35 Ill. Adm. Code 215.123 (b)(4) or 35 Ill. Adm. Code 215.123 (b)(5) is maintained.
9. Pursuant to 35 Ill. Adm. Code 215.124 (a), the owner or operator of the 6 external floating roof storage tanks shall not cause or allow the storage of any volatile petroleum liquid in the tank unless:
- a. The tank has been fitted with a continuous secondary seal extending from the floating roof to the tank wall (rim mounted secondary seal) or any other device which controls volatile organic material emissions with an effectiveness equal to or greater than a rim mounted secondary seal.
  - b. Each seal closure device meets the following requirements:
    - i. The seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and
    - ii. The accumulated area of gaps exceeding 0.32 centimeter (1/8 inch) in width between the secondary seal and the tank wall shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inches per foot of tank diameter).
  - c. Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers across at least 90 percent of the area of the opening.

- d. Openings are equipped with projections into the tank which remain below the liquid surface at all times.
  - e. Inspections are conducted prior to May 1, of each year to insure compliance with 35 Ill. Adm. Code 215.124 (a).
  - f. The secondary seal gap is measured prior to May 1, of each year.
  - g. Records of the types of volatile petroleum liquid stored, the maximum true vapor pressure of the liquid as stored, the results of the inspections and the results of the secondary seal gap measurements are maintained and available to the Illinois EPA, upon verbal or written request, at any reasonable time for a minimum of two years after the date on which the record was made.
10. Pursuant to 35 Ill. Adm. Code 215.582, this facility is subject to the following provisions:
- a. No person shall cause or allow the transfer of gasoline into any delivery vessel from any bulk gasoline terminal unless:
    - i. The bulk gasoline terminal is equipped with a vapor control system that limits emission of volatile organic material to 80 mg/1 (0.00067 lbs/gal) of gasoline loaded;
    - ii. The vapor control system is operating and all vapors displaced in the loading of gasoline to the delivery vessel are vented only to the vapor control system;
    - iii. There is no liquid drainage from the loading device when it is not in use;
    - iv. All loading and vapor return lines are equipped with fittings which are vapor tight; and
    - v. The delivery vessel displays the appropriate sticker pursuant to the requirements of 35 Ill. Adm. Code 215.584(b) or (d); or, if the terminal is driver-loaded, the terminal owner or operator shall be deemed to be in compliance with this section when terminal access authorization is limited to those owners and/or operators of delivery vessels who have provided a current certification as required by 35 Ill. Adm. Code 215.584(c)(3).
  - b. The operator of a bulk gasoline terminal shall:
    - i. Operate the terminal vapor collection system and gasoline loading equipment in a manner that prevents:

- A. Gauge pressure from exceeding 18 inches of water and vacuum from exceeding 6 inches of water as measured as close as possible to the vapor hose connection
  - B. A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B; and
  - C. Avoidable leaks of liquid during loading or unloading operations.
    - ii. Provide a pressure tap or equivalent on the terminal vapor collection system in order to allow the determination of compliance with 35 Ill. Adm. Code 215.582(c)(1)(A).
    - iii. Within 15 business days after discovery of the leak by the owner, operator, or the Agency, repair and retest a vapor collection system which exceeds the limits of subsection 35 Ill. Adm. Code 215.582 (c)(1)(A) or (B).
11. Ethanol, gasoline, and other material with a true vapor pressure of 2.5 psia or greater shall only be loaded out through the loading racks using submerged loading and only with the vapor control system properly operating.
12. Gasoline and gasoline blend means commercial quality gasoline and blend stocks for use as fuel in motor vehicle without further processing.
13. A petroleum product shall be considered to be a distillate material if the true vapor pressure is less than 0.01 psia at 70°F.
14. The Phillips Pipe Line Company shall inspect for leakage all of the components of the vapor control system which carry volatile organic material vapors according to the following intervals:
- a. Pump seals shall be inspected visually every week.
  - b. All valves and the coupler that connects to the delivery vessel shall be inspected by a portable detection unit between March 1 and April 30 of each year. All leaks shall be promptly repaired and a reinspection made within 3 months on those valves which were leaking.
- 15a. Within 90 days of a written request from the Illinois EPA or USEPA, the VOM emissions from the gasoline loading rack shall be measured during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request and demonstration from the Permittee which shows that it is not feasible to perform representative testing within 90 days.

- b. The performance test shall be performed in accordance with the methods specified in 40 CFR 60.503 for Bulk Gasoline Terminals.
  - c. Testing shall be performed by a qualified independent testing service.
  - d. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review and approval. A copy shall also be submitted to the USEPA. This plan shall describe the specific procedures for testing, including:
    - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
    - ii. The conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum operating rate, the levels of operating parameters at or within which compliance is intended to be shown, if applicable, and the means by which the operating parameters for the process and any control equipment will be determined.
  - e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may, at its discretion, accept notification with shorter notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe the testing.
16. The Permittee shall maintain records of the following:
- a. The throughput of each product through the loading racks (gal/mo and gal/yr);
  - b. The throughput of each product stored and in what storage tank. (gal/mo and gal/yr);
  - c. Emissions of VOM and HAP for each product from the truck loading racks as determined through Standard AP-42 emissions factors or other methods approved by the USEPA (lb/mo and ton/yr);
  - d. Total emissions of VOM and HAP for each product from the Storage Tanks as determined through Standard AP-42 emission factors or the most current version of the TANKs software (lb/mo and Ton/yr); and
  - e. Amount of propane combusted in the one furnace (gal/mo and gal/yr).
  - f. The number of regeneration cycles for the six dehydrators (cycles/mo and cycles/yr).

- g. Total Emissions of VOM and HAP for the facility (lb/mo and ton/yr).
  - h. A monthly and annual compilation of the records required by conditions #8, #9 and #10.
17. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three 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.
18. If there is an exceedance of 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. 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 violation and efforts to reduce emissions and future occurrences.
19. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system 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
20. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: Records required by Conditions 16(a) and (b).

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If you have any questions on this, please call Eric Jones at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

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cc: Illinois EPA, FOS Region 1  
Illinois EPA, Compliance Section  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from Phillips Pipe Line Company's bulk terminal, located in Kankakee, Illinois, 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 this bulk terminal. The limits as shown below limit storage and loadout of the various products handled by the facility. The resulting maximum emissions are well below the levels, e.g., volatile organic material (VOM) to less than 100 tons/year, combined hazardous air pollutants (HAPs) to less than 25 tons/year, single hazardous air pollutants (HAP) to less than 10 tons/year 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 product material is handled and control measures are more effective than required in this permit.

1. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, 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 Permit (CAAPP), and Section 112(G) of the Clean Air Act.
  
2. Emissions and operation of bulk terminal operations shall not exceed the following limits:

Process	Throughput		Emission Factor (Lb/Gal)	VOM Emissions	
	(Gal/Mo)	(Gal/Yr)		(Lb/Mo)	(Ton/Yr)
Gasoline Storage	65,000,000	520,000,000	0.00008**	5,000	20.00
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Ethanol Storage	2,000,000	10,000,000	0.0002**	400	1.00
Additive Storage	32,540	195,250	0.0005**	17	0.05
Transmix Storage	1,050,000	8,400,000	0.001**	1,063	4.25
Gasoline Blend# and/or Gasoline Loadout	16,250,000	120,000,000	0.00067***	10,888	40.2
Fugitive Losses from the Loading Rack from Gasoline/ Gasoline Blend	16,250,000	120,000,000	0.000054*	888	3.24
Distillate Loadout	17,500,000	140,000,000	0.0000095*	167	0.67
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Oil/Water Separators	7,500,000	55,150,000	0.0002	1,500	5.52
Relief Tank	2,250	18,000	0.0125	28	0.11
Wastewater Treatment with Catalytic Oxidizer****	7,500,000	55,000,000	0.00083	623	2.28
				Total:	80.58

- # Gasoline blend consists of 90% gasoline and 10% ethanol.
- \* Based on standard AP-42 emission factors for uncaptured emissions of VOM with an 90% overall control efficiency for ethanol (0% for distillate) and 98.7% for fugitive losses for the loadout of gasoline/gasoline blend for the following equation:

$$E = \frac{(12.46 * S * P * M) * (1 - EFF)}{(T)}$$

E is the loading loss (lb/1,000 gal)  
 S is the saturation factor  
 P is true vapor pressure of the liquid loaded (psia)  
 M is vapor molecular weight (lb/lb-mole)  
 T is the temperature of the bulk liquid loaded (°R)  
 Eff is the overall control efficiency.

- \*\* Based on standard AP-42 emission factors for breathing and working losses
- \*\*\* Based on emission limits defined in 35 Ill. Adm. Code 215.582
- \*\*\*\* Overall control efficiency of 90%

These limits are based on standard AP-42 emission factors and the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 3. Emissions and operation of one furnace shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Propane Usage</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>Factor</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
One Furnace	2,500	17,000	NO <sub>x</sub>	0.014	35	0.12
			CO	0.0019	4.75	0.02
			TSP	0.0004	1	0.01
			VOM	0.0005	1.25	0.01
			SO <sub>2</sub>	0.00015	0.375	0.01

These limits are based on standard AP-42 emission factors, sulfur content of 15 gr/100 ft<sup>3</sup>, propane as the only fuel fired in the furnaces and the information as provided by the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

4. Emissions and operation of 6 dehydrators shall not exceed the following limits:

<u>Process</u>	<u>Number of Cycles</u>		<u>VOM Emission Factor</u>	<u>VOM Emissions</u>	
	<u>(#/Mo)</u>	<u>(#/Yr)</u>	<u>(Lb/Regeneration)</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Regeneration	6	50	178.2	1,069.2	4.46

These limits are based on standard emission determination methods and the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

5. Emissions of VOM from fugitive losses (pumps, valves, seals, etc.), meter proving, maintenance activities, tank cleaning and filters shall not exceed 10.5 ton/yr.
6. Emissions of VOM from propane operations shall not exceed 4.25 ton/yr.

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