

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
NSPS SOURCE-RENEWAL

PERMITTEE

BP Products North America Inc.
Attn: Gary Putman
100 East Standard Oil Road
Rochelle, Illinois 61068

Application No.: 73040532

I.D. No.: 141805AAC

Applicant's Designation: LOADRACK2

Date Received: January 28, 2000

Subject: Bulk Terminal

Date Issued:

Expiration Date:

Location: 100 East Standard Oil Road, Rochelle

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of six internal floating roof storage tanks (Tanks #1, #2, #5, #8, #10, and #12), nine fixed roof storage tanks (Tanks #3, #4, #6, #7, #11, #13, #19, #20, and #26), and one truck loading rack equipped with a 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.
 - 3a. The one truck loading racks with vapor collection system is subject to a New Source Performance Standard (NSPS) for Bulk Gasoline Terminals, 40

CFR 60, Subparts A and XX. The Illinois EPA is administering NSPS on behalf of the United States EPA under a delegation agreement.

- b. Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading, pursuant to 40 CFR 60.502 (a).

- c. The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded, pursuant to 40 CFR 60.502 (b).
- d. Each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack, pursuant to 40 CFR 60.502 (d).
- e. Pursuant to 40 CFR 60.502 (e), loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:
 - i. The owner or operator shall obtain the vapor tightness documentation described in 40 CFR 60.505(b) for each gasoline tank truck which is to be loaded at the affected facility.
 - ii. The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.
 - iii. A. The owner or operator shall cross-check each tank identification number obtained in 40 CFR 60.502 (e)(2) with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:
 - 1. If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or
 - 2. If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.
 - B. If either the quarterly or semiannual cross-check provided in 40 CFR 60.502 (e)(3)(i)(A) or (B) reveals that these conditions were not maintained, the source must return to biweekly monitoring until such time as these conditions are again met.
 - 1. The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the documentation cross-check in 40 CFR 60.502 (e)(3).
 - 2. The terminal owner or operator shall take steps assuring that the non-vapor-tight gasoline tank truck will not be reloaded at the affected facility until

vapor tightness documentation for that tank is obtained.

3. Alternate procedures to those described in 40 CFR 60.502 (e)(1) through (5) for limiting gasoline tank truck loadings may be used upon application to, and approval by, the USEPA or Illinois EPA.
- f. The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system, pursuant to 40 CFR 60.502 (f).
- g. The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks, pursuant to 40 CFR 60.502 (g).
- h. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR 60.503 (d) , pursuant to 40 CFR 60.502 (h).
- i. No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water) , pursuant to 40 CFR 60.502 (i).
- j. Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected, pursuant to 40 CFR 60.502 (j).
- 4a. The Storage Tank #10 storage tank(s) is subject to New Source Performance Standards (NSPS), 40 CFR 60 Subparts A and Kb. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The Storage Tank #10 shall comply with the equipment standards contained in the NSPS, 40 CFR 60.112b.
- c. At all times the Permittee shall, to the extent practicable, maintain and operate these tanks, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the New Source Performance Standard.

- 5a. The Permittee shall fulfill the Testing and Procedures requirements of 60.113b. Notification should be sent to:

Illinois Environmental Protection Agency
 Division of Air Pollution Control - Regional Office
 5415 North University
 Peoria, Illinois 61614

- b. The Permittee shall fulfill applicable notification and recordkeeping requirements of the NSPS, 40 CFR 60.7 and 60.115b.
- c. The Permittee shall notify the Illinois EPA of any change in the type of material stored that are different than those identified in the application.
6. Emissions and operation of bulk terminal operations shall not exceed the following limits:

Process	Throughput		Emission	VOM Emissions	
	(Gal/Mo)	(Gal/Yr)	Factor (Lb/Gal)	(Lb/Mo)	(Ton/Yr)
Gasoline Storage**	50,000,000	310,520,000		4,200	24.00
Distillate Storage**	9,000,000	90,000,000		280	1.40
Ethanol Storage**	3,000,000	30,000,000		40	0.20
Additive Storage**	25,000	250,000		20	0.10
Transmix Storage**	445,200	4,452,000		180	0.90
Gasoline Blend# and/or Gasoline Loadout	50,000,000	310,520,000	0.000292***	14,600	45.34
Fugitive Losses from the Loading Rack from Gasoline/ Gasoline Blend#	50,000,000	310,520,000	0.0000672*	3,670	11.40
Ethanol Loadout	720,000	7,200,000	0.000265*	57	0.28
Distillate Loadout	9,000,000	90,000,000	0.00000858*	90	0.45
				Total:	84.07

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

* Based on standard AP-42 emission factors for uncaptured emissions of VOM with an 98.7% overall control efficiency for fugitive losses for the loadout of gasoline/gasoline blend, 0% for Ethanol, and 0% for distillate 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 NSPS (Subpart XX) emission limits of 35 mg/L

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.

7. Emissions of VOM from fugitive losses (pumps, valves, seals, etc.), and maintenance activities shall not exceed 6.0 ton/yr.
8. Pursuant to 35 Ill. Adm. Code 215.123 (b), the owner or operator of the 5 internal floating roof storage tanks (#1, #2, #5, #8, and #12) 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 215.582, 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).
10. Gasoline blend, 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.
11. Gasoline and gasoline blend means; any commercial quality gasoline and blend stocks for use as fuel in motor vehicle without further processing.
12. 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.
13. The Permittee 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.
- 14a. 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.
15. 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. Total Emissions of VOM and HAP for the facility (lb/mo and ton/yr).
16. 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.
17. 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.
18. 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
2009 Mall Street

Collinsville, Illinois 62234

19. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: Records required by Conditions 15(a) and (b).

It should be noted that the boiler is exempt from state permitting requirements pursuant to 35 Ill. Adm. Code 201.146(d). Also it should be noted that the potential emissions of VOM from the boiler are less than 01. tons/year.

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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 3
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from BP North America Products Inc. bulk terminal, located in Rochelle, 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:

<u>Process</u>	<u>Throughput</u>		<u>Emission Factor (Lb/Gal)</u>	<u>VOM Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Gasoline Storage**	50,000,000	310,520,000		4,200	24.00
Distillate Storage**	9,000,000	90,000,000		280	1.40
Ethanol Storage**	3,000,000	30,000,000		40	0.20
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$$E = \frac{(12.46 * S * P * M) * (1 - EFF)}{(T)}$$

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

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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 NSPS (Subpart XX) emission limits of 35 mg/L

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 of VOM from fugitive losses (pumps, valves, seals, etc.), and maintenance activities shall not exceed 6.0 ton/yr.

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