

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCE

PERMITTEE

Ashland Chemical, Inc.
Attn: Richard Wright
5200 Blazer Parkway
Dublin, Ohio 43017

Application No.: 73020131

I.D. No.: 031327AAC

Applicant's Designation: REBUILDPTO

Date Received: January 19, 1999

Subject: Organic Liquids Bulk Terminal

Date Issued: May 20, 1999

Expiration Date: May 20, 2004

Location: 8500 south Willow Springs Road, Willow Springs

Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of 58 storage tanks: 28 capacity 15,000 gallons (including 1 tank with internal floating roof), 29 capacity 40,000 gallons (including 8 tanks with internal floating roof) and one 10,000 gallons, 5 blending tanks, tank truck unloading/loading rack, rail car unloading system, two container filling rooms, groundwater air stripper and one boiler 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 Volatile Organic Material (VOM) and Hazardous Air Pollutants (HAPs) from the source to less than major source thresholds (i.e., 25 tons/year for VOM, 10 tons/year for a single HAP and 25 tons/year for totaled HAP). As a result, the source is excluded from the requirements 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 for this location.
- 2a. The storage tanks are subject to New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels, 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. A volatile organic liquid (VOL) that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa (0.75 psi) but less than 76.6 kPa (11.1 psi) shall not be stored in the storage tanks having a storage capacity equal to or greater than 40,000 gallons, unless the tank is equipped with internal floating roof meeting the specifications of 40 CFR 60.112b(a)(1).

- c. A volatile organic liquid (VOL) that, as stored, has a maximum true vapor pressure equal to or greater than 76.6 kPa (11.1 psi) shall not be stored in the storage tanks having a storage capacity equal to or greater than 20,000 gallons (40 CFR 60.112b(b)).

- d. At all times the Permittee shall also maintain and operate the storage tanks, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).
- 3. The Permittee shall follow monitoring and maintenance requirements of 40 CFR 60.113b(a) for storage tanks with capacity greater than or equal to 40,000 gallons which are equipped with internal floating roof.
- 4a. Emissions of organic material into the atmosphere shall not exceed 3.6 kg/hr (8 lbs/hr) during the loading of any organic material from the aggregate loading pipes of any loading area having throughput of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or an equivalent device (35 Ill. Adm. Code 218.122(a)).
- b. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device (35 Ill. Adm. Code 218.122(b)).
- c. If no odor nuisance exists the limitations of Conditions 4(a) and (b) shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3K (70°F) (35 Ill. Adm. Code 218.122(c)).
- 5. The blending tanks shall be operated in compliance with the provisions of Conditions 5(b) and (c).
- 6. Total VOM emissions from the source operations shall not exceed 23.1 ton/yr as specified below:
 - a. VOM emissions and operations of the organic liquids storage tank farms shall not exceed the following limits:

VOM Emissions: 1450 lb/mo, 4.3 ton/yr.

Chemical Properties M.W. x V.P.* (lb-mol x psi)	Chemical Throughput			
	Fixed Roof Tanks		Floating Roof Tanks	
	(10 ³ Gal/Mo)	(10 ³ Gal/Yr)	(10 ³ Gal/Mo)	(10 ³ Gal/Yr)
< 100	5,934	35,600	1,000	6,000
100 - 200	117	700	834	5,000
200 - 300	84	500	250	1,500

* M.W. - Molecular weight of the chemical (lb-mol)

V.P. - Vapor pressure of the chemical at the maximum storage

temperature (psi)

VOM emissions from the operations of storage tanks shall be calculated using equations given by AP-42 (5th edition, Section 7.1) and utilized in the USEPA distributed computer programs TANKS2 or TANKS3.

- b. VOM emissions and operations of the five blending tanks shall not exceed the following limits:

Chemical Throughput (10 ³ Gal/Mo) (10 ³ Gal/Yr)		VOM Emissions (Lb/Mo) (T/Year)	
1,000	6,000	870	2.6

- c. VOM emissions and operations of the tank truck loading rack and container filling rooms shall not exceed the following limits:

Chemical Throughput (10 ³ Gal/Mo) (10 ³ Gal/Yr)		VOM Emissions (Lb/Mo) (T/Year)	
7,400	44,500	3,300	10.0

- d. VOM emissions from the operations of blending tanks, tank truck loading rack and container filling rooms shall be calculated using equations given by AP-42 (5th edition, Section 5.2).

- e. Fugitive VOM emissions from the terminal operations shall not exceed 1,700 lb/mo and 5.0 ton/yr. It shall be calculated using USEPA SOCFI factors (EPA-453/R-95-017).

- f. VOM emissions from the groundwater air stripper shall not exceed 350 lb/mo and 1.0 ton/yr. It shall be calculated using the following equation:

$$E = Q_{in} \times C_{in} - Q_{out} \times C_{out}$$

Where:

Q_{in} , Q_{out} - Air stripper inlet and outlet water flow rates.

C_{in} , C_{out} - VOM concentration in inlet and outlet water.

The inlet and outlet VOM concentration in water flow shall be measured once a year.

- g. VOM emissions from the natural gas fired boiler shall not exceed 0.2 ton/yr. This limit is based on the maximum firing rate, year round operations and standard emission factor.
- h. These limits define the potential emissions of the VOM and are based on the actual emissions determined from the maximum production capacity.
- i. 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.

7. The emissions of HAPs as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program permit from the Illinois EPA. As a

result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a Clean Air Act Permit Program permit from the Illinois EPA.

8. The Permittee shall follow reporting and recordkeeping requirements of 40 CFR 60.115b(a) for storage tanks with capacity greater than or equal to 40,000 gallons which are equipped with internal floating roof.
9. The Permittee shall keep records showing the dimension of the storage tank and an analysis showing the capacity of the storage tank with a design capacity less than 75 m³ (20,000 gal) for the life of the source [40 CFR 60.116b(b)].
10. The Permittee shall maintain monthly records of the following items:
 - a. For each storage or blending tank, each loading/unloading area and each container filling room:
 - i. Names and identification number of materials transferred and/or stored;
 - ii. Material throughput (gal/mo, gal/yr); and
 - iii. Material true vapor pressure.
 - b. Separate emission records for each individual HAP with emission rate exceeding 0.5 ton/mo.
 - c. Inlet and outlet water flow rate in the air stripper (gal/mo, gal/yr).
11. The Permittee shall notify the Illinois EPA about any change in the chemicals stored at the source other than those specified in the permit application within 10 days of such a change.
12. 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 and 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 Illinois EPA request for records during the course of a source inspection.
13. The Permittee shall submit the following additional information from the prior calendar year, along with the Annual Emissions Report, due May 1st of each year: names and identification number of materials transferred and their throughput (gal/yr).

If there have been no exceedances during the prior calendar year, the

Annual Emission Report shall include a statement to that effect.

14. 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 - Regional Office
Eisenhower Tower
1701 First Avenue
Maywood, Illinois 60153

If you have any questions on this permit, please call Valeriy Brodsky at 217/782-2113.

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

DES:VJB:jar

cc: Illinois EPA, FOS Region 1
Illinois EPA, Compliance Section
USEPA

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the bulk terminal plant 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. This is a throughput of 44,500,000 gallons of liquid organic chemicals per year. The resulting maximum emissions are well below the levels, e.g., 25 tons/year for VOM, 10 tons per year for a single HAP, and 25 tons per year for totaled HAP, at which this source would be considered a major source for purposes 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.

1. Total VOM emissions from the source operations shall not exceed 23.1 ton/yr as specified below:

a. VOM emissions and operations of the organic liquids storage tank farms shall not exceed the following limits:

VOM Emissions: 1450 lb/mo, 4.3 ton/yr.

Chemical Properties M.W. x V.P.* (lb-mol x psi)	Chemical Throughput			
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100 - 200	117	700	834	5,000
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* M.W. - Molecular weight of the chemical (lb-mol);

V.P. - Vapor pressure of the chemical at the maximum storage temperature (psi)

VOM emissions from the operations of storage tanks shall be calculated using equations given by AP-42 (5th edition, Section 7.1) and utilized in the USEPA distributed computer programs TANKS2 or TANKS3.

b. VOM emissions and operations of the five blending tanks shall not exceed the following limits:

Chemical Throughput		VOM Emissions	
(10 ³ Gal/Mo)	(10 ³ Gal/Yr)	(Lb/Mo)	(T/Year)
1,000	6,000	870	2.6

c. VOM emissions and operations of the tank truck loading rack and container filling rooms shall not exceed the following limits:

Chemical Throughput
(10³ Gal/Mo) (10³ Gal/Yr)

7,400 44,500

VOM Emissions
(Lb/Mo) (T/Year)

3,300 10.0

- d. VOM emissions from the operations of blending tanks, tank truck loading rack and container filling rooms shall be calculated using equations given by AP-42 (5th edition, Section 5.2).
- e. Fugitive VOM emissions from the terminal operations shall not exceed 1,700 lb/mo and 5.0 ton/yr. It shall be calculated using USEPA SOCFI factors (EPA-453/R-95-017).
- f. VOM emissions from the groundwater air stripper shall not exceed 100 lb/mo and 1.0 ton/yr. It shall be calculated using the following equation:

$$E = Q_{in} \times C_{in} - Q_{out} \times C_{out}$$

Where:

Q_{in} , Q_{out} - Air stripper inlet and outlet water flow rates

C_{in} , C_{out} - VOM concentration in inlet and outlet water

The inlet and outlet VOM concentration in water flow shall be measured once a year.

- g. VOM emissions from the natural gas fired boiler shall not exceed 0.2 ton/yr. This limit is based on the maximum firing rate, year round operations and standard emission factor.
2. The emissions of HAPs as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a Clean Air Act Permit Program permit from the Illinois EPA.