

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Ashland Distribution Company
Attn: Richard Wright
5200 Blazer Parkway
Dublin, Ohio 43017

Application No.: 84060032 I.D. No.: 031806AAX
Applicant's Designation: SYN MINOR Date Received: August 13, 2001
Subject: Chemical Distribution
Date Issued: December 2, 2002 Expiration Date: December 2, 2007
Location: Main Street and Maley Road, Lemont

This permit is hereby granted to the above designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of bulk loading/unloading, filling operation, blending operation, tank farm (53 tanks), and boiler as described in 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:
 - i. To less than major source thresholds (i.e., 25 ton/year for VOM, 10 tons/year of any single HAP or 25 ton/year of any combination of such HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit.
 - ii. To less than 25 ton/year potential to emit for VOM. As a result the source is not subject to 35 Ill. Adm. Code 218 Subpart TT.
 - iii. 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 Permittee shall comply with the applicable requirements of 35 Ill. Adm. Code 218, Subpart C.
3. Total combined operations and emissions from the bulk loading/unloading shall not exceed the following limits:

<u>VOM Throughput</u>		<u>VOM Emissions</u>	
<u>(mmgal/Mo)</u>	<u>(mmgal/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
2.390	22.940	0.61	5.87

These limits are based on maximum plant throughput and maximum operating hours of 8,760 hrs/yr. Emissions were determined by using the formula listed in Special Condition 10a. Compliance with annual limits shall be determined from a running total of 12 months of data.

4. Total combined operations and emissions from the container filling shall not exceed the following limits:

<u>VOM Throughput</u>		<u>VOM Emissions</u>	
<u>(mmgal/Mo)</u>	<u>(mmgal/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
1.664	15.972	0.35	3.41

These limits are based on maximum plant throughput and maximum operating hours of 8,760 hrs/yr. Emissions were determined by using the formula listed in Special Condition 10a. Compliance with annual limits shall be determined from a running total of 12 months of data.

5. Total combined operations and emissions from the blending operation shall not exceed the following limits:

<u>VOM Throughput</u>		<u>VOM Emissions</u>	
<u>(mmgal/Mo)</u>	<u>(mmgal/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
0.691	6.630	0.30	2.87

These limits are based on maximum plant throughput and maximum operating hours of 8,760 hrs/yr. Emissions were determined by using the formula listed in Special Condition 10b. Compliance with annual limits shall be determined from a running total of 12 months of data.

6. Total combined operations and emissions from the tank farm shall not exceed the following limits:

<u>VOM Throughput</u>		<u>VOM Emissions</u>	
<u>(mmgal/Mo)</u>	<u>(mmgal/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
3.179	30.520	0.45	4.33

These limits are based on TANKS3 emission factors and maximum operating hours of 8,760 hrs/yr. Compliance with annual limits shall be determined from a running total of 12 months of data.

7. Total combined emissions of any single HAP¹ from all emission units and activities shall not exceed the following limits:

Single HAP¹ Emissions
(Tons/Yr)

¹ Single HAP means any individual HAP listed in Section 112(b) of the Clean Air Act as amended in 1990 (e.g., xylene, toluene).

8. Note that there is a "nested" limit on the emissions of the combination of HAPs as a result of the limit on VOM emissions. The HAPs emitted at this source have been determined to be VOMs and therefore limiting VOM emissions also limits HAP emissions.
9. The emissions of hazardous air pollutants (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 HAPs from this source not triggering the requirement to obtain a Clean Air Act Permit Program permit from the Illinois EPA.
- 10a. The following equation shall be used to determine emissions from bulk loading/unloading and container filling operations:

$$L_L = (12.46 \times S \times P \times M \times Q) / (1,000 \times T)$$

Where:

L_L = The loading or filling loss (lb/mo)

S = The saturation factor (0.6)

A = The average product of the vapor pressure and the molecular weight (psia lb/lb-mole) as calculated in 11(a)(iii), below

Q = The throughput (gal/mo)

T = The temperature ($^{\circ}$ Rankine) = 528° R = 68° F

- b. The following equation shall be used to determine emissions from blending operations:

$$W_L = 2.4 \times 10^{-5} \times A \times Q \times K_N \times K_p$$

Where:

W_L = The loading or filling loss (lb/mo)

A = The average product of the vapor pressure and the molecular weight (psia lb/lb-mole) as calculated in 11(a)(iii), below

M = The molecular weight (lb/lb-mole)

Q = The throughput (gal/mo)

K_N = The turnover factor, dimensionless, N = # of turnovers for turnovers > 36 , $K_N = (180 + N) / 6N$ for turnovers ≤ 36 , $K_N = 1$

K_p = The working loss product factor, dimensionless for organic liquids, $K_p = 1$

11a. The Permittee shall keep records of the following item(s):

- i. The Permittee shall keep the vapor pressure and molecular weight for the materials used in the bulk loading/unloading, blending, filling, and stored in the tank farm.
- ii. Throughput for the bulk loading/unloading, container filling, blending operation, and the tank farm (gal/mo & gal/yr).
- iii. Calculations showing the weighted average vapor pressure and molecular weight for throughput calculations. This shall consist of an average calculated as follows:

$$A = \frac{\sum (V \times M \times Q_i)}{Q_T}$$

A = The average product of the vapor pressure and the molecular weight (psia lb/lb-mole)

V = The true vapor pressure for each individual chemical (psia)

M = The molecular weight for each individual chemical (lb/lb-mole)

Q_i = The individual throughput for each individual chemical (gal/mo)

Q_T = The total throughput for all chemicals (gal/mo)

- iv. VOM emissions calculations for the bulk loading/unloading, container filling, blending operation, and the tank farm (ton/mo and ton/yr).
- v. Usage and emissions of single HAPs (lbs/month and tons/year).
- vi. A list of HAPs present and the weight percent content of each HAP for each chemical, and any other material used containing HAPs.
- vii. Natural gas usage (mmscf/mo & mmscf/yr).

b. 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 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 respond to an Illinois EPA request for records during the course of a source inspection.

12. 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.

13. Total combined operations and emissions from the boiler shall not exceed the following limits:

<u>Natural Gas Usage</u>		<u>NO_x Emissions</u>		<u>VOM Emissions</u>	
<u>(mmft³/Mo)</u>	<u>(mmft³/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
4.87	58.47	0.24	2.92	0.02	0.16
<u>CO Emissions</u>				<u>PM Emissions</u>	
<u>(Tons/Mo)</u>	<u>(Ton/Yr)</u>			<u>(Tons/Mo)</u>	<u>(Ton/Yr)</u>
0.21	2.46			0.02	0.22

These limits are based on standard emission factors and maximum operating hours of 8760 hrs/yr. Compliance with annual limits shall be determined from a running total of 12 months of data.

14. The fugitive emissions are estimated at the following:

<u>Pollutant</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
VOM	0.594	5.70
HAP	0.210	2.02

15. 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

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

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

DES:JPB:jar

cc: IEPA, FOS Region 1
 IEPA, Compliance Section
 USEPA - Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from chemical distribution 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. The resulting maximum emissions are below the levels, e.g., 25 tons/year of VOM, at which this source would be considered a major source for purposes of the Clean Air Act Permit Program.

1. VOM Emissions from the Source

<u>Process/Operation</u>	<u>Throughput</u>		<u>VOM Emissions</u>	
	<u>(mmgal/Mo)</u>	<u>(mmgal/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Bulk Loading/Unloading	2.390	22.940	0.61	5.87
Container Filling	1.664	15.972	0.35	3.41
Blending	0.691	6.630	0.30	2.87
Tank Farm	3.179	30.520	0.45	4.33
Fugitive	-----	-----	0.59	5.70

2. Total combined operations and emissions from the boiler shall not exceed the following limits:

<u>Natural Gas Usage</u>		<u>NO_x Emissions</u>		<u>VOM Emissions</u>	
<u>(mmft³/Mo)</u>	<u>(mmft³/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
4.87	58.47	0.24	2.92	0.02	0.16
<u>CO Emissions</u>		<u>PM Emissions</u>			
<u>(Tons/Mo)</u>	<u>(Ton/Yr)</u>			<u>(Tons/Mo)</u>	<u>(Ton/Yr)</u>
0.21	2.46			0.02	0.22

3. As a consequence of the requirements of this permit, the emissions of hazardous air pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source will be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs so that HAP emissions do not trigger the requirements to obtain a Clean Air Act Permit Program permit from the Illinois EPA.

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