

- ii. Product fill rates and VOM emissions from the 11 fill stations shall not exceed the following limits:

<u>Maximum Fill Rate per Station (Lb/Hour)</u>	<u>Total Annual Fill Rate (Tons/Year)</u>	<u>VOM Emissions (Lb/Hour) (Tons/Yr)</u>	
7,100	7,155	13.4	5.9

- iii. Throughput and VOM emissions from the storage tanks shall not exceed the following limits:

<u>Product</u>	<u>Total Annual Throughput (Gal/Yr)</u>	<u>Total Monthly Throughput (Gal/Mo)</u>	<u>VOM Emissions (Tons/Mo) (Tons/Yr)</u>	
MIPA	52,100	4,342	0.04	0.50
Trichloroethylene	142,500	11,875	0.04	0.50

All other tanks storing materials with vapor pressures less than 1.0 psia shall not exceed monthly throughputs of 15,200 gallon/month each.

- b. 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.
- c. These limits define the potential emissions of VOM and are based on maximum usage and standard emissions equations. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month and the preceding 11 months.
- 3a. The Permittee shall maintain daily records of the following items:
 - i. number of batches for each type of product
 - ii. chemical name and weight of each raw material per batch per tank (lbs)
 - iii. VOM and HAP content of each batch (%)
 - iv. finished product throughput per batch (gal)
 - v. hours of operation of each batch (hours)
 - vi. material stored in each storage tank and throughput of material of each storage tank.
 - vii. fill rate of each filling unit (lb/hr)

- b. The Permittee shall maintain monthly records of the following items:
 - i. VOM and HAP emissions from the 11 mixing/blending tanks, 11 fill stations, and storage tanks (tons/month and tons/year).

4a. Within 90 days of a written request from the Agency or USEPA, the volatile organic material emissions of the blending and filling operation shall be measured by an approved testing service, during conditions which are representative of maximum emissions.

- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Agency: Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Volatile Organic Material	35 Ill. Adm. Code 218.102 (USEPA Method 18 or 25A)

- c. The test shall be designed to determine the VOM emissions from both blending and filling operations that produce the largest VOM emission rate.

5a. This permit is issued based on the blending operations not being subject to the requirements of Subpart QQ of the 35 Ill. Adm. Code Part 218. This is a consequence of the voluntarily requested production limits of this federally enforceable state operating permit.

- b. This permit is issued based on the operation of all storage tanks not being subject to the requirements of Subpart TT of the 35 Ill. Adm. Code Part 218. This is a consequence of the voluntarily requested production limits of this federally enforceable state operating permit.

6a. The Agency shall be notified prior to these tests to enable the Agency 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 Agency may at its discretion accept notifications with shorter advance notice provided that the Agency will not accept such notifications if it interferes with the Agency's ability to observe testing.

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
Eisenhower Tower
1701 First Avenue
Maywood, Illinois 60153

Illinois Environmental Protection Agency
Attn: Source Emission Test Specialist
Division of Air Pollution Control
Eisenhower Tower
1701 First Avenue
Maywood, Illinois 60153

- b. Copies of the Final Report(s) for these tests shall be submitted to the Agency within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:
 - i. A summary of results
 - ii. General information
 - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule
 - iv. Detailed description of test conditions, including
 - A. Process information for each emission unit, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption. The Permittee shall state the basis for the use of the raw materials and demonstrate why they are representative of maximum VOM emissions.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing, and
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- c. Submittals of information shall be made as follows:
 - i. Submittal of Test Plan - one copy to Source Emission Test Specialist and one copy to Permit Section.
 - ii. Notices of Test - one copy to Source Emission Test Specialist, one copy to the Regional Office, and one copy to Permit Section.
 - iii. Final Report - one copy to Source Emission Test Specialist, one copy to the Regional Office, and one copy to Permit Section.

7. 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 be able to respond to an Illinois EPA request for records during the course of a source inspection.
8. 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.
9. 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
Eisenhower Tower
1701 South First Avenue
Maywood, Illinois 60153

10. The Permittee shall submit the following additional information with the Annual Emission Report, due May 1st if each year: number of batches and chemical makeup of each product. If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

It should be noted that the gas fired boiler is exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(d).

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If you have any questions on this, please call Tara T. Nguyen-Ede at 217/782-2113.

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

DES:TNE:psj

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 the chemical blending and processing 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 well below the levels, e.g., 25 tons per year for VOM and combined HAPs and 10 tons per year for any single HAP, 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.

1. Operation of the chemical blending processing facility shall not exceed the following limits:

a. Raw material and VOM emission rates from the 11 mixing/blending tanks shall not exceed the following limits:

Maximum Process Weight Rate per Tank <u>(Lb/Batch)</u>	Maximum Production <u>(Batches/Year) (Tons/Yr)</u>		VOM Emissions <u>(Lb/Batch) (Ton/Yr)</u>	
12,545	2749	7065	1.2	0.15

b. Product fill rates and VOM emissions from the 11 fill stations shall not exceed the following limits:

Maximum Fill Rate per Station <u>(Lb/Hour)</u>	Maximum Annual Fill Rate <u>(Tons/Year)</u>	VOM Emissions <u>(Lb/Hr) (Tons/Yr)</u>	
7,100	7155	13.4	5.9

c. Emission from Storage Tanks:

<u>Product</u>	Total Annual Throughput <u>(Gal/Yr)</u>	Total Monthly Throughput <u>(Gal/Mo)</u>	VOM Emissions <u>(Tons/Mo) (Tons/Yr)</u>	
MIPA	52,100	4,342	0.04	0.50
Trichloroethylene	142,500	11,875	0.04	0.50

All other tanks storing materials with vapor pressures less than 1.0 psia shall not exceed monthly throughputs of 15,200 gallon/month each.

- d. These limits define the potential emissions of VOM and are based on maximum usage and standard emissions equations. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month and the preceding 11 months.

2. Emission Estimates:

- i. Tanks: Methods AP-42 (Equation 2, Section 4.3, "Fixed roof working losses")

A. Emissions (lb/yr) = $2.4 \times 10^{-5} (M_w) (VP) (V) (N) (K_n)$

where M_w = molecular weight of vapor (lb/lb-mole)

VP = vapor pressure of mixture (psi)

V = volume of tank (gal)

N = turnovers; number of batches per year (#/yr)

K_n = turnover factor (dimensionless)

B. Emission (lb/hr) = $\frac{\text{Emissions (lb/yr)}}{(\text{Turnovers}) (\text{Blend Time})}$

where Turnover = number of batches per year (#/yr)

Blend Time = blend time for each batch (hr/batch)

(if the period of operation was less than 1 hour, 1 hour was used to compute hourly emissions).

- ii. Fill Stations:

A. Emissions (lb/yr) = (ATP) (% Volatilized)

where % Volatilized = percentage of raw material/product loss due to volatilization (estimated from the vapor pressure and molecular weight of the material).

ATP = annual throughput of raw material or product (lb/yr).

- iii. Storage Tanks:

Emissions of VOM for storage tanks were determined on the basis of the calculations for storage tanks found in AP-42, Chapter 12.

3. 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.

TNE:psj