

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install (PTI) # 03-16018

A. Source Description

This permit addresses a paint spray operation with oven, K001, and a rail car cleaning operation with flare, P002, at the Union Tank Car facility in Marion, Ohio.

B. Facility Emissions and Attainment Status

The facility is potentially a major source for Title V for VOC and HAP emissions. Marion county is in attainment/unclassifiable for all criteria pollutants.

C. Source Emissions

Potential VOC Emissions: The potential coating VOC emissions from K001 are based on the maximum hourly gallon usage rate and the maximum VOC content at 8760 hours of operation a year. The potential cleanup operation VOC emissions from K001 are based on the maximum annual gallon usage, the maximum VOC content and a 70% recovery rate. The potential VOC emissions from P002 are based on the maximum residual material left in the rail cars, maximum density of the material, minimum number of hours required to clean a rail car, a destruction efficiency of 98% from the flare and 8760 hours per year of operation.

K001:

Coatings: (5 gal/hr) (3.5 lbs VOC/gal) (8760 hrs/yr) (ton/2000 lbs) = 76.65 tons VOC/yr

Cleanup Operations: (4000 gal/yr) (7.51 lbs VOC/gal) (ton/2000 lbs) (1-0.70) = 4.51 tons VOC/yr

P002: (90 gal/car) (8.24 lbs VOC/gal) (car/3 hrs) (8760 hrs/yr) (ton/2000 lbs) (1-0.98) = 21.65 tons VOC/yr

Total Potential VOC Emissions: 76.65 tons/yr + 4.51 tons/yr + 21.65 tons/yr = **102.81 tons/yr**

Potential HAPs Emissions: The potential emissions from K001 and P002 are greater than 10 tons/yr for individual HAPs and 25 tons/yr for aggregate HAPs.

Restricted VOC Emissions: The facility would trigger the Title V thresholds for VOC emissions if the potential emissions of K001 and P002 were used to establish the emissions units' limits. The facility, however, wishes to avoid triggering Title V thresholds for criteria pollutants. To accomplish this, synthetic minor restrictions were required. The facility has accepted a federally enforceable restriction on coating usage (30,000 gallons per year) and a coating content restriction of 3.5 lbs VOC/gal for K001 and a restriction on the number of cars that can be cleaned by P002 to reduce their VOC emissions below Title V levels.

K001:

Coatings: (30,000 gal/yr) (3.5 lbs VOC/gal) (ton/2000 lbs) = 52.50 tons VOC/yr

Cleanup Operations: (4000 gal/yr) (7.51 lbs VOC/gal) (ton/2000 lbs) (1-0.70) = 4.51 tons VOC/yr

P002: (90 gal/car) (8.24 lbs VOC/gal) (500 cars/yr) (ton/2000 lbs) (1-0.98) = 3.71 tons VOC/yr

Total Potential VOC Emissions: 52.50 tons/yr + 4.51 tons/yr + 3.71 tons/yr = **60.72 tons/yr**

Restricted HAPs Emissions: The facility would trigger the Title V thresholds for HAPs emissions if the potential emissions of K001 and P002 were used to establish the emissions units' limits. The facility, however, wishes to avoid triggering Title V thresholds for HAPs. To accomplish this, synthetic minor restrictions were required. The facility has accepted the following federally enforceable restrictions on HAPs emissions: Annual HAP emissions resulting from the use of coatings and cleanup materials and the cleaning of rail cars in emissions units K001 and P002 combined shall not exceed 10 tons per rolling 12-month period for any individual HAP or 25 tons per rolling 12-month period for any combination of HAPs.

D. Conclusion

With the coating gallon usage restrictions, the coating VOC content restriction, the maximum number of cars cleaned and the rolling HAP limitations, the VOC and HAP emissions will be below the Title V thresholds. Therefore, the facility will not be subject to Title V or Maximum Achievable Control Technology (MACT) requirements.



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Lazarus Gov.
Center

**RE: DRAFT PERMIT TO INSTALL
MARION COUNTY**

CERTIFIED MAIL

Application No: 03-16018

DATE: 5/4/2004

Union Tank Car Company
Jack Wood
151st Street and Railroad Avenue
East Chicago, IN 46312

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$400** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

NWDO

MARION COUNTY

PUBLIC NOTICE

ISSUANCE OF DRAFT PERMIT TO INSTALL 03-16018 FOR AN AIR CONTAMINANT SOURCE FOR UNION TANK CAR COMPANY

On 5/4/2004 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Union Tank Car Company**, located at **939 Holland Road PO Box 1125, Marion, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 03-16018:

Paintbooth with oven, steel shot blast booth with cartridge house and cleaning rack VOC flare.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Don Waltermeyer, Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402 [(419)352-8461]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 03-16018

Application Number: 03-16018
APS Premise Number: 0351010025
Permit Fee: **To be entered upon final issuance**
Name of Facility: Union Tank Car Company
Person to Contact: Jack Wood
Address: 151st Street and Railroad Avenue
East Chicago, IN 46312

Location of proposed air contaminant source(s) [emissions unit(s)]:
**939 Holland Road PO Box 1125
Marion, Ohio**

Description of proposed emissions unit(s):
Paintbooth with oven, steel shot blast booth with cartridge house and cleaning rack VOC flare.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any

Union Tank Car Company

Facility ID: 0351010025

PTI Application: 03-16018

Issued: To be entered upon final issuance

information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may

Union Tank Car Company

PTI Application: 03-16018

Issued: To be entered upon final issuance

lead to such sanctions

Facility ID: 0351010025

Union Tank Car Company

Facility ID: 0351010025

PTI Application: 03-16018

Issued: To be entered upon final issuance

and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

Union Tank Car Company

Facility ID: 0351010025

PTI Application: 03-16018

Issued: To be entered upon final issuance

Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	60.72
Individual HAPs	9.90
Combined HAPs	24.90

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K001 - Paint spray booth with dry filtration (Modification of PTI #03-1643 issued on March 28, 1984 to include federally enforceable limits)	OAC rule 3745-31-05(A)(3)	17.5 lbs of volatile organic compounds (VOC)/hr from coating operation
		751.7 pounds VOC/month, 4.51 tons VOC/yr from cleanup operations
		See A.2.a
		52.50 tons of VOC per rolling, 12-month period from coating operations (See A.2.b.i and B.1)
	OAC rule 3745-31-05(C)	Annual HAP emissions from emissions units K001 and P002 combined shall not exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs. (See A.2.b.ii)
	OAC rule 3745-21-09(U)(1)(d)	3.5 pounds VOC per gallon of coating, excluding water and exempt solvents, for coatings dried at temperatures not exceeding 200 degrees Fahrenheit

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

- 2.a** The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(U)(1)(d) and OAC rule 3745-31-05(C).

Union
PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

2.b This permit establishes the following federally enforceable emission limitations for purposes of avoiding applicability of Title V and Maximum Achievable Control Technology (MACT) regulations:

- i. 52.50 tons VOC per rolling 12-month period based on coating usage restrictions. (See B.1) and a coating VOC content 3.5 lbs/gal established by OAC rule 3745-21-09(U)(1)(d).
- ii. Annual HAP emissions from emissions units K001 and P002 combined shall not exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the HAP emission rates specified in the following table:

Maximum Allowable Cumulative HAP Emission Rates (tons):

<u>Month(s)</u>	<u>Individual HAP</u>	<u>Combined HAPs</u>
1-1	0.83	2.08
1-2	1.66	4.16
1-3	2.49	6.24
1-4	3.32	8.32
1-5	4.15	10.40
1-6	4.98	12.48
1-7	5.81	14.56
1-8	6.64	16.64
1-9	7.47	18.72
1-10	8.30	20.80
1-11	9.13	22.88
1-12	9.90	24.90

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual HAP limitations shall be based upon a rolling, 12-month summation of the monthly emission rates.

B. Operational Restrictions

- 1. The maximum annual coating usage rate for this emissions unit shall not exceed 30,000 gallons, based upon a rolling, 12-month summation of the monthly coating usage rates. The permittee

Emissions Unit ID: **K001**

shall use existing records to determine compliance upon startup under this permit. Therefore, it is not necessary to establish federally enforceable restrictions for the first 12 months of operation under the provisions of this permit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all coatings employed in this emissions unit:
 - a. the name and identification number of each coating employed;
 - b. the VOC content of each coating, as applied, in pounds per gallon;
 - c. the VOC content of each coating (excluding water and exempt solvents), in pounds per gallon, as applied [the VOC content shall be calculated in accordance with the equation specified in paragraph (B)(8) of OAC rule 3745-21-10 for $C_{VOC,2}$];
 - d. the amount of each individual HAP in each coating, in pounds per gallon, as applied;
 - e. the number of gallons of each coating employed;
 - f. the total number of gallons of all coatings employed (summation of C.1.e);
 - g. the annual coating usage, in gallons, for all coatings employed, based upon a rolling 12-month summation of the monthly usage rates;
 - h. the VOC emission rate for each coating (C.1.b x C.1.e), in pounds;
 - i. the total VOC emission rate for all coatings (summation of C.1.h), in pounds or tons;
 - j. the annual VOC emissions, in tons, from all coatings, based upon a rolling 12-month summation of the monthly VOC emissions.
 - k. the emission rate for each individual HAP from each coating employed (C.1.d x C.1.e), in pounds per month;

Note: The information required above must be recorded for the materials as applied, including any thinning solvents added at the emissions unit.

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

2. The permittee shall collect and record the following each month for cleanup operations:
 - a. the name and identification of each cleanup material employed;
 - b. the VOC content of each cleanup material employed, in pounds per gallon;
 - c. the amount of each individual HAP in each cleanup material employed, in pounds per gallon;
 - d. the number of gallons of each cleanup material employed;
 - e. the VOC emissions from each cleanup material employed (C.2.b x C.2.d), in pounds;
 - f. the total VOC emissions from all cleanup materials employed (summation of C.2.e), in pounds or tons;
 - g. the annual year to date VOC emissions from cleanup operations, in tons per year (summation of C.2.f) for each calendar month to date from January to December); and
 - h. the emission rate for each individual HAP from each cleanup material employed (C.2.c x C.2.d), in pounds per month.

3. The permittee shall collect and record the following HAP information each month for emission units K001 and P002 combined:
 - a. the total emission rate for each individual HAP from all coatings and cleanup materials employed in emissions unit K001 and individual HAP emitted from emissions unit P002 (rail car cleaning operation with flare), in pound per month (summation of the individual HAPs quantified in C.1.k, C.2.h and from emissions unit P002*);

*Quantification of HAP emissions from the railcar cleaning operation are required in the monitoring and recordkeeping section of the permit for emissions unit P002.
 - b. the total HAP emission rate for all HAPs combined from all coatings and cleanup materials employed in emissions unit K001 and total HAPs emitted from emissions unit P002 (summation of all individual HAPs quantified in C.3.a) , in tons per month
 - c. for the first 12 months of operation, the cumulative monthly emission rate of each individual HAP and all HAPs combined, in tons per month; and

Emissions Unit ID: **K001**

- d. after the first 12 months of operation, the annual emissions of each individual HAP and all HAPs combined, based upon a rolling 12-month summation of monthly emissions.
4. The Permit to Install for this emissions units was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the Permit to Install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the Permit to Install application and the Screen3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the Screen3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: methyl isobutyl ketone

TLV (mg/m3): 204,826

Maximum Hourly Emission Rate (lbs/hr): 2.05

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 2545

MAGLC (mg/m3): 4877

Pollutant: toluene

TLV (mg/m3): 188,405

Maximum Hourly Emission Rate (lbs/hr): 0.54

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 676

MAGLC (mg/m3): 4486

Pollutant: diethylene glycol monomethyl ether

TLV (mg/m3): 96,663

Maximum Hourly Emission Rate (lbs/hr): 1.75

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 2177

MAGLC (mg/m3): 2302

Pollutant: ethylene glycol monobutyl ether acetate

TLV (mg/m3): 131,043

Maximum Hourly Emission Rate (lbs/hr): 1.68

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 2088

MAGLC (mg/m3): 3120

Pollutant: xylene

TLV (mg/m3): 434,192

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

Maximum Hourly Emission Rate (lbs/hr): 2.68
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 3320
MAGLC (mg/m3): 10,338

Pollutant: n-butyl alcohol
TLV (mg/m3): 60,630
Maximum Hourly Emission Rate (lbs/hr): 0.75
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 934.5
MAGLC (mg/m3): 1444

Pollutant: MEK
TLV (mg/m3): 589,775
Maximum Hourly Emission Rate (lbs/hr): 1.17
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 1461
MAGLC (mg/m3): 14,042

Pollutant: methyl n-amyl ketone
TLV (mg/m3): 233,497
Maximum Hourly Emission Rate (lbs/hr): 1.03
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 1292
MAGLC (mg/m3): 5559

Pollutant: isopropyl alcohol
TLV (mg/m3): 491,534
Maximum Hourly Emission Rate (lbs/hr): 0.26
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 323.1
MAGLC (mg/m3): 11,703

Pollutant: propylene glycol monomethyl ether
TLV (mg/m3): 368,589
Maximum Hourly Emission Rate (lbs/hr): 0.25
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 310.7
MAGLC (mg/m3): 8776

Pollutant: isobutyl alcohol
TLV (mg/m3): 151,575
Maximum Hourly Emission Rate (lbs/hr): 0.26
Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 323.1
MAGLC (mg/m3): 3609

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

Pollutant: acetone

TLV (mg/m3): 1,187,117

Maximum Hourly Emission Rate (lbs/hr): 0.52

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m3): 646.2

MAGLC (mg/m3): 28,265

5. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing Permit to Install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final Permit to Install prior to the change.

6. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall notify the Northwest District Office in writing of any monthly record showing the use of noncomplying coatings (coating that exceeds the 3.50 lbs of VOC/gallon excluding water and exempt solvents) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Northwest District Office within 30 days following the end of the calendar month.

Union Tank Car Company
PTI A
Issued

Facility ID: 0351010025

Emissions Unit ID: **K001**

2. The permittee shall submit deviation (excursion) reports which identify any exceedances of the following:

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

- a. any exceedances of the 52.50 tons OC per rolling 12-month period emission limitation.
- b. any exceedances of the maximum annual coating usage rate not to exceed 30,000 gallons, based upon a rolling, 12-month summation of the monthly coating usage rates.
- d. any exceedances of the rolling individual HAP and combined HAPs emission limitations specified in section A.2.b.ii.,
- e. for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative individual HAP and combined HAPs emission limitations specified in section A.2.b.ii.
- f. any exceedances of the 751.7 lbs VOC/month from cleanup operations.

These reports shall be submitted in accordance with the general terms and conditions of this permit.

3. The permittee shall submit annual deviation (excursion) reports which identify any exceedances of the 4.51 tons VOC/yr from cleanup operations. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 17.5 lbs VOC/hr from coating operations

Applicable Compliance Method: The hourly emission limitation represents the potential to emit* of the emissions unit. Therefore, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

*The potential to emit is based on a worst-case coating operation involving a maximum coating usage rate of 5.0 gallons per hour and a maximum VOC content of 3.50 pounds per gallon.

- b. Emission Limitation: 751.7 lbs VOC/month from cleanup operations

Union

PTI A

Emissions Unit ID: **K001**

Issued: To be entered upon final issuance

Applicable Compliance Method: Compliance with the above emission limitation shall be based upon the record keeping requirements specified in section C.2.

Emissions Unit ID: **K001**

- c. Emission Limitation: 4.51 tons VOC/yr from cleanup operations

Applicable Compliance Method: Compliance with the above emission limitation shall be based upon the record keeping requirements specified in section C.2.
- d. Emission Limitation: 3.5 pounds VOC per gallon of coating, excluding water and exempt solvents, for coatings dried at temperatures not exceeding 200 degrees Fahrenheit

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.1. Formulation data or U.S. EPA Method 24 shall be used to determine the VOC content of the coatings.
- e. Emission Limitation: 52.50 tons of VOC per rolling, 12-month period from coating operations

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.1.
- f. Emission Limitation: Annual HAP emissions from emissions units K001 and P002 combined shall not exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs.

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.3.
- g. Emission Limitation: The maximum annual coating usage rate for this emissions unit shall not exceed 30,000 gallons, based upon a rolling, 12-month summation of the monthly coating usage rates.

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.1.

F. Miscellaneous Requirements

None

Union

PTI A

Emissions Unit ID: P002

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - Rail car cleaning operation with flare	OAC rule 3745-31-05(A)	Control Requirements (See A.2.b) See A.2.c and B.3
	OAC rule 3745-31-05(C)	3.71 tons of volatile organic compounds per rolling 12-month period (See A.2.a.i and B.1) Annual HAP emissions from emissions units K001 and P002 combined shall not exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs (See A.2.a.ii)

2. Additional Terms and Conditions

- 2.a This permit establishes the following federally enforceable emission limitations for purposes of avoiding applicability of Title V and Maximum Achievable Control Technology (MACT) regulations:
 - i. 3.71 tons VOC per rolling 12-month period based on the number of railcars cleaned. (See B.1)
 - ii. Annual HAP emissions from emissions units K001 and P002 combined shall not

Union

PTI A

Emissions Unit ID: **P002**

Issued: To be entered upon final issuance

exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs.

Union

PTI A

Emissions Unit ID: P002

Issued: To be entered upon final issuance

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the HAP emission rates specified in the following table:

Maximum Allowable Cumulative HAP Emission Rates (tons):

<u>Month(s)</u>	<u>Individual HAP</u>	<u>Combined HAPs</u>
1-1	0.83	2.08
1-2	1.66	4.16
1-3	2.49	6.24
1-4	3.32	8.32
1-5	4.15	10.40
1-6	4.98	12.48
1-7	5.81	14.56
1-8	6.64	16.64
1-9	7.47	18.72
1-10	8.30	20.80
1-11	9.13	22.88
1-12	9.90	24.90

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual HAP limitations shall be based upon a rolling, 12-month summation of the monthly emission rates.

- 2.b Best Available Technology (BAT) control requirements for this emissions unit has been determined to be the use of a flare with a 98% destruction efficiency.
- 2.c The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).

B. Operational Restrictions

- 1. The maximum annual number of rail cars cleaned in this emissions unit shall not exceed 500 rail cars, based upon a rolling, 12-month summation of the number of rail cars cleaned monthly.

Emissions Unit ID: P002

The permittee shall use existing records to determine compliance upon startup under this permit. Therefore, it is not necessary to establish federally enforceable restrictions for the first 12 months of operation under the provisions of this permit.

2. A pilot flame shall be maintained at all times in the flare's pilot light burner.
3. The flare shall be designed for and operated with no visible emissions, except for periods of time not to exceed a total of 5 minutes during any 2 consecutive hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the number of rail cars cleaned; and
 - b. the rolling, 12-month summation of the number of rail cars cleaned
2. The permittee shall collect and record the following information each month:
 - a. the name and identification number of each rail car material flared;
 - b. the VOC content of each rail car material flared, in pounds per gallon;
 - c. the amount of each individual HAP in each rail car material flared, in pounds per gallon;
 - d. the number of gallons of each rail car material flared;
 - e. the VOC emission rate for each rail car material flared, in tons, using the following equation: $(C.2.b) \times (C.2.d) \times (1-0.98^*)$;

*The destruction efficiency of flare
 - f. the total VOC emission rate for all rail car materials flared (summation of C.2.e), in tons;
 - g. the annual VOC emissions from all rail car materials flared, based upon a rolling 12-month summation of the monthly VOC emissions; and
 - h. the emission rate for each individual HAP from each rail car material flared $(C.2.c \times C.2.d)$, in lbs/month
3. The permittee shall collect and record the following HAP information each month for emission

Union

PTI A

Issued: To be entered upon final issuance

units K001 and P002 combined:

Emissions Unit ID: **P002**

Union

PTI A

Emissions Unit ID: **P002**

Issued: To be entered upon final issuance

- a. the total emission rate for each individual HAP from all rail car materials flared and emitted from emissions unit K001 (Paint spray booth), in pounds per month (summation of the individual HAPs quantified in C.2.h and from emissions unit K001*);

*Quantification of HAP emissions from the paint spray booth are required in the monitoring and recordkeeping section of the permit for emissions unit K001.
 - b. the total HAP emission rate for all HAPs combined from all rail car materials flared and emitted from emissions unit K001 (summation of all individual HAPs quantified in C.3.a), in tons/month;
 - c. for the first 12 months of operation, the cumulative monthly emission rate of each individual HAP and all HAPs combined, in tons per month; and
 - d. after the first 12 months of operation, the annual emissions of each individual HAP and all HAPs combined, based upon a rolling 12-month summation of monthly emissions.
4. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day:

- a. All periods during which there was no pilot flame.
- b. The operating times for the flare, monitoring equipment, and the associated emissions unit.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify any exceedances of the following:
 - a. any exceedances of the 3.71 tons VOC per rolling 12-month period emission limitation.
 - b. any exceedances of the maximum annual number of rail cars cleaned not to exceed 500 cars, based upon a rolling, 12-month summation of the rail cars cleaned monthly.
 - c. any exceedances of the rolling individual HAP and combined HAPs emission limitations specified in section A.2.a.ii.,

Union

PTI A

Emissions Unit ID: P002

Issued: To be entered upon final issuance

- d. for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative individual HAP and combined HAPs emission limitations specified in section A.2.a.ii.
2. The permittee shall submit deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

E. Testing Requirements

1. Compliance with the emission limitations specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 3.71 tons of VOC per rolling, 12-month period

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.2.
 - b. Emission Limitation: Annual HAP emissions from emissions units K001 and P002 combined shall not exceed 9.90 tons per rolling 12-month period for any individual HAP or 24.90 tons per rolling 12-month period for any combination of HAPs

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.3.
 - c. Emission Limitation: The maximum annual number of railcars cleaned in this emissions unit shall not exceed 500 railcars, based upon a rolling, 12-month summation of the number of railcars cleaned monthly

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements in section C.1.
 - d. Emission Limitation: The flare shall be designed for and operated with no visible emissions, except for periods of time not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method: If required, compliance shall be demonstrated in accordance with 40 CFR Part 60, Appendix A - Method 22.

Union Tank Car Company
PTI A
Issued

Facility ID: 0351010025

Emissions Unit ID: P002

F. Miscellaneous Requirements

1. Additional modeling to that perform for emissions unit K001 to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because toxic compound emissions from emissions unit P002 did not result in additional air toxic emissions greater than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.