



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
MIAMI COUNTY

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 08-04137

DATE: 12/21/2000

DAP Inc
Matthew Stewart
2400 Boston St Ste 200
Baltimore, MD 21224-0000

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 **\$26000** 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,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA RAPCA IN Miami Valley Reg Plan Com



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Terms and Conditions

Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**DRAFT PERMIT TO INSTALL 08-04137**

Application Number: 08-04137
APS Premise Number: 0855130356
Permit Fee: **To be entered upon final issuance**
Name of Facility: DAP Inc
Person to Contact: Matthew Stewart
Address: 2400 Boston St Ste 200
Baltimore, MD 21224-0000

Location of proposed air contaminant source(s) [emissions unit(s)]:

**875 N Third St
Tipp City, Ohio**

Description of proposed emissions unit(s):

2 existing contact cement mixers & 2 existing mastic mixers-Chapter 31 Modification replacing PTI 08-3642 issued April 16, 1997.

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

DAP Inc

Facility ID: 0855130356

PTI Application: 08-04137

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written 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. See B.11 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

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A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. 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 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 request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. 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.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit

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shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

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10. Permit To Operate Application

- 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 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 thirty (30) days after commencing operation of the source(s) covered by this permit.

11. 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.

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B. State Only Enforceable 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 Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable 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 state-only required 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. 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.

4. 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.

5. Termination of Permit To Install

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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.

6. 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 lead to such sanctions 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 are inadequate 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 prove to be inadequate or cannot meet applicable standards.

7. 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.

8. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

9. Construction Compliance Certification

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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.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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.

C. 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>
OC	56.79

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. Within 120 days after promulgation of 40 CFR 63 Subpart FFFF, Misc. Organic NESHAP, the permittee shall submit an Initial Notification Report which certifies whether or not the permittee is subject to the promulgated standard. If the permittee is subject to the final standard, the following information shall also be included in the Initial Notification Report:
 - a. the name and mailing address of the permittee;
 - b. the physical location of the source if it is different from the mailing address;
 - c. identification of the relevant MACT standard and the permittee's compliance date;
 - d. a brief description of the nature, design, size, and method of operation of the source, including the operating design capacity, and an identification of each emission point of each hazardous air pollutant;
 - e. a statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.
2. Within 60 days following completion of the required compliance demonstration activity specified in the 40 CFR 63 Subpart FFFF, the permittee shall submit a notification of compliance status that contains the following information:
 - a. the methods used to determine compliance;
 - b. the results of any performance tests, opacity or visible emission observations, continuous monitoring systems (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - c. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - d. the type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times in accordance with the test methods specified in 40 CFR 63 Subpart FFFF;
 - e. an analysis demonstrating whether the affected source is a major source or an area source;
 - f. a description of the air pollution control equipment or method for each emission point,

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including each control device or method for each hazardous air pollutant and the control efficiency (percent) for each control device or method; and

- g. a statement of whether or not the permittee has complied with the requirements of 40 CFR 63 Subpart FFFF.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

DAP I

PTI A

Emissions Unit ID: P024

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P024 - Work In Progress Tank A (TK A WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit)
		See 2.a
		See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employi

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Facility ID: 0855130356

Emissions Unit ID: P024

ng a
condens
er with
a
control
efficienc
y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each

DAP I**PTI A****Issued: To be entered upon final issuance**

Emissions Unit ID: P024

- c. the calculated vapor pressure of the batch;
material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement

DAP I

PTI A

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Emissions Unit ID: P024

Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate

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PTI A

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Emissions Unit ID: P024

shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate

DAP I

PTI A

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Emissions Unit ID: P024

for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = (0.01246 * S * P * MW * Q)/T = Loading emissions per day
Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
P = Vapor Pressure of the material

DAP I

PTI A

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Emissions Unit ID: P024

loaded
 at
 tempera
 ture T
 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
 Temper
 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
 Gas-pha
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 (ft/sec)
 =
 0.00438
 *
 $U^{0.78}$
 *
 $(18/M$
 $W)^{0.3}$
 3
 $U = 0.1$
 mile per
 hour
 from

DAP I

PTI A

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Emissions Unit ID: P024

USEPA
 example
 for
 indoor
 equipment
 A =
 Open
 area of
 Tank
 (square
 meters)
 P =
 Vapor
 Pressure
 of VOC
 (psia)
 H =
 Batch
 Time
 (hr/batc
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 R =
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 al gas
 constant
 = 10.73
 psia*cu
 bic
 feet/lb-
 mole*R
 T =
 Batch
 Temper
 ature
 (R)
 N =
 Number
 of
 Batches
 per day

DAP I**PTI A****Issued: To be entered upon final issuance**

Emissions Unit ID: P024

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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PTI A

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control device, monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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Emissions Unit ID: P024
and the
actual
organic
compou
nd
emissio
ns from
each
such
day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compound

DAP I
PTI A

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emissio
ns for
each
such
day.

c. An identification of each day
formati
on
compon
ents
containi
ng
methyle
ne
chloride
were
process
ed in
more
than
two
work in
progres
s tanks
(Work
in
Progres
s Tanks
A
through
O), at
any
time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

DAP I

PTI A

Emissions Unit ID: P024

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3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

DAP I

PTI A

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Emissions Unit ID: P024

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable

DAP I

PTI A

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Emissions Unit ID: P024

ble
Compliance
Method-
Compliance
shall be
based
upon
the
record
keeping
specified in
Section
III.1
and
shall be
the
summation
of
the daily
organic
compound
emission
rates
from the
production
of
formation
on
components
in
the TK
A WIP
tank for
the
calendar
year,
divided

DAP I

PTI A

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Emissions Unit ID: P024

by
2,000
pounds
per ton.

c. Emission Limitation-

311.2
lbs/day
OC,
combine
d
emissio
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Emissions Unit ID: P024

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d. Emission Limitation-

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Issued: To be entered upon final issuance

Emissions Unit ID: P024

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organic
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year,
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s tanks
identifie
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Tank A
through
Tank O,
divided
by
2,000
pounds
per ton.

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be

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rate
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the
overall
control
system
efficienc
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85% for
organic
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nds.

- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures

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specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternative U.S. EPA approve

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d test methods may be used with prior approval from the Ohio EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not

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Emissions Unit ID: P024
later
than 30
days
prior to
the
proposed test
date(s),
the
permittee shall
submit
an
"Intent
to Test"
notification to
the
appropriate
Ohio
EPA
District
Office
or local
air
agency.
The
"Intent
to Test"
notification shall
describe
in detail
the
proposed test
methods
and
procedures, the
emissions unit
operating
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ers, the
time(s)
and
date(s)
of the
test(s),
and the
person(s
) who
will be
conduct
ing the
test(s).
Failure
to
submit
such
notificat
ion for
review
and
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l prior
to the
test(s)
may
result in
the
Ohio
EPA
District
Office's
or local
air
agency's
refusal
to
accept
the
results
of the

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Emissions Unit ID: P024

emission
test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing

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Emissions Unit ID: P024

procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests

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Emissions Unit ID: P024

and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio

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EPA
District
Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P024

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B. State Only Enforceable Section

I. 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>
P024 - Work In Progress Tank A (TK A WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P024) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P024

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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

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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 material s, or use of new material s, that would result in an increase in emissions of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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the "Air
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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P025

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P025 - Work in Progress Tank B (TK B WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

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condens
er with
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control
efficienc
y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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Emissions Unit ID: P025

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Paint
and Ink
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Facilitie
s",
March
1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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Emissions Unit ID: P025

calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate for all

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Emissions Unit ID: P025

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P024
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the
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through
P038);

*Displacement = (0.01246 * S * P * MW *
Q)/T = Loading emissions per day
Where: MW = Vapor Molecular Weight
(lb/lb-mole)

S = 1.0
from
USEPA
AP-42
Chapter
5 for
bottom
or
submerg
ed
loading
P =
Vapor
Pressure
of the
material
loaded

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Emissions Unit ID: P025

at
 tempera
 ture T
 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
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 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
 Gas-pha
 se mass
 transfer
 coefficie
 nt
 (ft/sec)
 $=$
 0.00438
 *
 $U^{0.78}$
 *
 $(18/M$
 $W)^{0.3}$
 3
 $U = 0.1$
 mile per
 hour
 from
 USEPA

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Emissions Unit ID: P025

example
for
indoor
equipme
nt
A =
Open
area of
Tank
(square
meters)
P =
Vapor
Pressure
of VOC
(psia)
H =
Batch
Time
(hr/batc
h)
R =
Univers
al gas
constant
= 10.73
psia*cu
bic
feet/lb-
mole*R
T =
Batch
Temper
ature
(R)
N =
Number
of
Batches
per day

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Emissions Unit ID: P025

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system, control

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device,
monitoring
equipment,
and the
associated
emissions unit.

IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:

a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the

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actual
organic
compou
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emissio
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each
such
day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the

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Emissions Unit ID: P025

actual organic compound emissions for each such day.

c. An identification of each day formati on compon ents containi ng methyle ne chloride were process ed in more than two work in progres s tanks (Work in Progres s Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the

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average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable Compliance Method- Compliance

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nce shall be based upon the record keeping specified in Section III.1 and shall be the summation of the daily organic compound emission rates from the production of formation components in the TK B WIP tank for the calendar year, divided by 2,000 pounds per ton.

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c. Emission Limitation- 311.2
 lbs/day
 OC,
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 emissio
 ns units
 P024
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 P038

Applica
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 Method-
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 upon
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 record
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 Section
 III.1 of
 this
 permit.

d. Emission Limitation- 56.79
 TPY

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Emissions Unit ID: P025

OC,
combined
emission
limitation
for
emissions
units
P024
through
P038

Applicable
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shall be
based
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specified
in
Section
III.1 of
this
permit
and
shall be
the
summation
of
the daily
organic
compound

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emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance

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nce with
the
overall
control
system
efficienc
y of
85% for
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nds.

- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-

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10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternative U.S. EPA approved test methods may be used with

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Emissions Unit ID: P025

prior
approval from
the
Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not
later
than 30
days
prior to
the

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Emissions Unit ID: P025

propose
d test
date(s),
the
permitted
shall
submit
an
"Intent
to Test"
notification
to the
appropriate
Ohio
EPA
District
Office
or local
air
agency.
The
"Intent
to Test"
notification
shall
describe
in detail
the
proposed
test
methods
and
procedures,
the
emissions
unit
operating
parameters

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ers, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the

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Emissions Unit ID: P025

emission
test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing

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Emissions Unit ID: P025

procedures
provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests

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Emissions Unit ID: P025

and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio

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EPA
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Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P025

B. State Only Enforceable Section

I. 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>
P025 - Work in Progress Tank B (TK B WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P024) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration

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to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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Emissions Unit ID: P025

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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Emissions Unit ID: P025

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P025

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

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Emissions Unit ID: P025

runs
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the "Air
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Policy"
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change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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PTI A

Emissions Unit ID: P026

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P026 - Work in Progress Tank C (TK C WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

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condens
er with
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y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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Manufa
cturing
Facilitie
s",
March
1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the

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controlled OC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1 - the overall control efficiency

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Emissions Unit ID: P026

k. the total calculated controlled OC
 emission rate for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0
 from USEPA AP-42 Chapter 5 for bottom or submerged loading
 P =

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Emissions Unit ID: P026

Vapor
 Pressure
 of the
 material
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 $Q =$
 Volume
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 material
 loaded
 (gal/day
)
 $T =$
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Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
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 $=$
 0.00438
 *
 $U^{0.78}$
 *
 $(18/M$
 $W)^{0.3}$
 3
 $U =$ 0.1
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 hour
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 USEPA

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example
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equipme
nt
A =
Open
area of
Tank
(square
meters)
P =
Vapor
Pressure
of VOC
(psia)
H =
Batch
Time
(hr/batc
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al gas
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mole*R
T =
Batch
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(R)
N =
Number
of
Batches
per day

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Emissions Unit ID: P026

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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and the actual organic compound emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day

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and the actual organic compound emissions for each such day.

c. An identification of each day formation on components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all

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3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section

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permit.

b. Emission Limitation-

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Emissions Unit ID: P026

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tank for
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2,000
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c. Emission Limitation-

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Applica
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Emissions Unit ID: P026
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III.1 of
this
permit.

d. Emission Limitation-

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TPY
OC,
combine
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ns units
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upon
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record
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Emissions Unit ID: P026

Section III.1 of this permit and shall be the summation of the daily organic compound emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

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The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determi

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ned in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence

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gases.
Alternat
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EPA
approve
d test
methods
may be
used
with
prior
approva
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the
Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio

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EPA
District
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or local
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agency.

Not
later
than 30
days
prior to
the
propose
d test
date(s),
the
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submit
an
"Intent
to Test"
notificat
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ate
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EPA
District
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The
"Intent
to Test"
notificat
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describe

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Emissions Unit ID: P026

in detail
the
propose
d test
methods
and
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emissio
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time(s)
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test(s),
and the
person(s
) who
will be
conduct
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test(s).
Failure
to
submit
such
notificat
ion for
review
and
approva
l prior
to the
test(s)
may
result in
the

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Emissions Unit ID: P026

Ohio
EPA
District
Office's
or local
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refusal
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data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results

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of the
emissions
test(s)
shall be
signed
by the
person
or
persons
responsible for
the tests
and
submitted to the
appropriate
Ohio
EPA
District
Office
or local
air
agency
within
30 days
following
completion of
the
test(s).
The
permittee may
request
additional time
for the
submitta

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1 of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P026

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B. State Only Enforceable Section

I. 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>
P026 - Work in Progress Tank C (TK C WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P026) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P026
exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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the
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applicati
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the "Air
Toxic
Policy"
for the
change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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PTI A**

Emissions Unit ID: P027

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P027 - Work in Progress Tank D (TK D WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

Emissions Unit ID: P027
condens
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y of
85% or
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2.b Combined OC emissions from P024
through
P038
(Work
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Progres
s Tanks
A
through
O) shall
not
exceed
311.2
lbs/day,
and
56.79
TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each batch;

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- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program"

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mVolume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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- k. the total calculated controlled OC emission rate for all calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

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work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = (0.01246 * S * P * MW * Q)/T = Loading emissions per day
Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
P = Vapor Pressure of the material loaded

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 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
 Temper
 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
 Gas-pha
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 (ft/sec)
 $=$
 0.00438
 *
 $U^{0.78}$
 *
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 $U = 0.1$
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 USEPA

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example
for
indoor
equipme
nt
A =
Open
area of
Tank
(square
meters)
P =
Vapor
Pressure
of VOC
(psia)
H =
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R =
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al gas
constant
= 10.73
psia*cu
bic
feet/lb-
mole*R
T =
Batch
Temper
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(R)
N =
Number
of
Batches
per day

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Emissions Unit ID: P027

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment

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Emissions Unit ID: P027

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compound

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emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compound

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emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

- b. Emission Limitation-

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c. Emission Limitation-

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the record keeping specified in Section III.1 of this permit.

d. Emission Limitation-

56.79 TPY OC, combined emission limitation for emissions units P024 through P038

Applicable Compliance Method- Compliance shall be based upon the record keeping specified in

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Section III.1 of this permit and shall be the summation of the daily organic compound emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

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The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined

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Facility ID: 0855130356

Emissions Unit ID: P027

ned in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternat

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- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air

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agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods

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emissions unit
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result in the
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air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to

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ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be

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signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where warrant

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or local
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agency.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P027

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B. State Only Enforceable Section

I. 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>
P027 - Work in Progress Tank D (TK D WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P027) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P027

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Emissions Unit ID: P027

Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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 handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P028 - Work in Progress Tank E (TK E WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3). 1.19 lbs/hr OC, 7.13 lbs/day OC, and 1.30 TPY OC

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employi

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Emissions Unit ID: P028

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85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each

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- c. the calculated vapor pressure of the batch;
material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement

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Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate

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shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate

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for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
 P = Vapor Pressure of the material

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 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
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 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
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 (ft/sec)
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 *
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Emissions Unit ID: P028

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A =
Open
area of
Tank
(square
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P =
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(psia)
H =
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mole*R
T =
Batch
Temper
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(R)
N =
Number
of
Batches
per day

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Emissions Unit ID: P028

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection)

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Emissions Unit ID: P028
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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compou

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- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compou

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Emissions Unit ID: P028

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2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

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V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable

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Compliance Method-Compliance shall be based upon the record keeping specified in Section III.1 and shall be the summation of the daily organic compound emission rates from the production of formation on components in the TK E WIP tank for the calendar year, divided by

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2,000
pounds
per ton.

c. Emission Limitation-

311.2
lbs/day
OC,
combined
emission
limitation
for
emissions
units
P024
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P038

Applicable
Compliance
Method-
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Emissions Unit ID: P028

d. Emission Limitation-

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the daily organic compound emission rate, for the calendar year, from the production of formation on components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conduct

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- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specific

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10. The
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Emissions Unit ID: P028

methods
may be
used
with
prior
approval from
the
Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not
later

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Emissions Unit ID: P028

than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the

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Failure
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test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedu

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ble for
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submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where warranted, with prior approval from the appropriate Ohio EPA

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District
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or local
air
agency.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P028

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B. State Only Enforceable Section

I. 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>
P028 - Work in Progress Tank E (TK E WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P028) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Emissions Unit ID: P028

Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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

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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 material s, or use of new material s, that would result in an increase in emissions of any pollutant with a listed TLV

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application
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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 be 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.

The permittee shall collect, record, and retain

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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

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P029

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P029 - Work in Progress Tank F (TK F WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

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er with
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control
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y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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s",
March
1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate for all

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*Displacement = (0.01246 * S * P * MW *
Q)/T = Loading emissions per day
Where: MW = Vapor Molecular Weight
(lb/lb-mole)

S = 1.0
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USEPA
AP-42
Chapter
5 for
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 Volume
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Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

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N =
Number
of
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per day

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Emissions Unit ID: P029

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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and the actual organic compound emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day

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and the actual organic compound emissions for each such day.

c. An identification of each day formati on compon ents containi ng methyle ne chloride were process ed in more than two work in progres s tanks (Work in Progres s Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all

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3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable Compliance Method- Compliance

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shall be based upon the record keeping specified in Section III.1 and shall be the summation of the daily organic compound emission rates from the production of formation components in the TK F WIP tank for the calendar year, divided by 2,000 pounds per ton.

c. Emission Limitation-

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d. Emission Limitation-

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Emissions Unit ID: P029

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2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be
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the overall control system efficiency of 85% for organic compounds.

- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The

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test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternative U.S. EPA approved test methods may be used with prior

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approval from the Ohio EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed

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d test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the

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test(s),
and the
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test(s).
Failure
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test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedu

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submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where warranted, with prior approval from the appropriate Ohio EPA

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District
Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>
P029 - Work in Progress Tank F (TK F WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P029) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration

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to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P030

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P030 - Work in Progress Tank G (TK G WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3). 1.12 lbs/hr OC, 1.12 lbs/day OC, and 0.09 TPY OC

- 2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employi

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2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:

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- a. the company identification for each batch of adhesives;
- b. the total number of gallons of each batch;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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(the controlled OC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control

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Emissions Unit ID: P030

efficiency);

k. the total calculated controlled OC emission rate for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day

Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0
 from
 USEPA
 AP-42
 Chapter
 5 for
 bottom
 or
 submerged
 loading

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Facility ID: 0855130356

Emissions Unit ID: P030

P = Vapor Pressure of the material loaded at temperature T (psia)

Q = Volume of material loaded (gal/day)

T = Batch Temperature (R)

Evaporation = $\frac{MW * K * A * P * 3600 * H}{R * T * N}$ = evaporation emissions per day
 Where: MW = Molecular weight of species (lb/lb-mole)

K = Gas-phase mass transfer coefficient (ft/sec)

= 0.00438 * U^{0.78} * (18/MW)^{0.33}

U = 0.1 mile per hour from

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USEPA
 example
 for
 indoor
 equipme
 nt
 A =
 Open
 area of
 Tank
 (square
 meters)
 P =
 Vapor
 Pressure
 of VOC
 (psia)
 H =
 Batch
 Time
 (hr/batc
 h)
 R =
 Univers
 al gas
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 = 10.73
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 mole*R
 T =
 Batch
 Temper
 ature
 (R)
 N =
 Number
 of
 Batches
 per day

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Total emissions = Displacement Loss + Evaporation Loss

- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection)

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0

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lbs/day,
and the
actual
organic
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day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2

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lbs/day
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Emissions Unit ID: P030

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2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

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V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable

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calendar
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divided

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per ton.

c. Emission Limitation-

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Emissions Unit ID: P030
permit.

d. Emission Limitation-

56.79
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Emissions Unit ID: P030

emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance

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overall
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85% for
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- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-

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10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternative U.S. EPA approved test methods may be used with

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prior
approval from
the
Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not
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than 30
days
prior to
the

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submit
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"Intent
to Test"
notification
to the
appropriate
Ohio
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or local
air
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The
"Intent
to Test"
notification
shall
describe
in detail
the
proposed
test
methods
and
procedures,
the
emissions
unit
operating
parameters

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ers, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the

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emission
test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing

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procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests

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and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio

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EPA
District
Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>
P030 - Work in Progress Tank G (TK G WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P030) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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applicati
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the "Air
Toxic
Policy"
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change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P031 - Work in Progress Tank H (TK H WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a condenser with a control efficiency

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y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

- 1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
- 2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each batch;

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- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program

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mVolume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

- k. the total calculated controlled OC emission rate for all

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*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight
 (lb/lb-mole)

S = 1.0
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 $Q =$
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Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

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Emissions Unit ID: P031

Total emissions = Displacement Loss +
Evaporation Loss

- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment

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Emissions Unit ID: P031

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:

a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compound

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emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compound

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emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

- b. Emission Limitation-

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Emissions Unit ID: P031

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Emissions Unit ID: P031

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c. Emission Limitation-

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the record keeping specified in Section III.1 of this permit.

d. Emission Limitation-

56.79 TPY OC, combined emission limitation for emissions units P024 through P038

Applicable Compliance Method- Compliance shall be based upon the record keeping specified in

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Section III.1 of this permit and shall be the summation of the daily organic compound emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

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Emissions Unit ID: P031

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods

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Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air

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Emissions Unit ID: P031

agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods

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Emissions Unit ID: P031

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ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be

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Emissions Unit ID: P031

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VI. Miscellaneous Requirements

None

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Emissions Unit ID: P031

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B. State Only Enforceable Section

I. 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>
P031 - Work in Progress Tank H (TK H WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P031) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P031

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Emissions Unit ID: P031
Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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 handbo

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Emissions Unit ID: P031

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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Emissions Unit ID: P031

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; and,

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increase d/decrea sed exhaust flow, changes in stack height, changes in stack diamete r, 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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P031

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

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Emissions Unit ID: P031

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P032

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P032 - Work in Progress Tank I (TK I WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a

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Emissions Unit ID: P032
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85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each batch;

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- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program

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Emissions Unit ID: P032

shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate

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Emissions Unit ID: P032

for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
 P = Vapor Pressure of the material

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Q =
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T =
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Evaporation = $MW * K * A * P * 3600 * H / R * T * N$ = evaporation emissions per day
Where: MW = Molecular weight of species
(lb/lb-mole)

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Emissions Unit ID: P032

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Total emissions = Displacement Loss + Evaporation Loss

- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection)

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Facility ID: 0855130356

Emissions Unit ID: P032
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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compou

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Emissions Unit ID: P032

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- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compou

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Emissions Unit ID: P032

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2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

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Emissions Unit ID: P032

b. Emission Limitation-

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Emissions Unit ID: P032

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Emissions Unit ID: P032

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Emissions Unit ID: P032

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2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be
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determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential

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- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate

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Facility ID: 0855130356

Emissions Unit ID: P032
describe
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Failure
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Emissions Unit ID: P032

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Emissions Unit ID: P032

y to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s)

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shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where

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VI. Miscellaneous Requirements

None

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Emissions Unit ID: P032

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B. State Only Enforceable Section

I. 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>
P032 - Work in Progress Tank I (TK I WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P032) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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

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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 material s, or use of new material s, that would result in an increase in emissions of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P032

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

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the "Air
Toxic
Policy"
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change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P033

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P033 - Work in Progress Tank J (TK J WIP Tank, Holding Tank for Adhesives), controlled by condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

- 2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a

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condens
er with
a
control
efficienc
y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

Emissions Unit ID: P033

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II:
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Estimati
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Emissio
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Paint
and Ink
Manufa
cturing
Facilitie
s",
March
1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate

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shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate

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for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
P = Vapor Pressure of the material

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loaded
 at
 tempera
 ture T
 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
 Temper
 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
 Gas-pha
 se mass
 transfer
 coefficie
 nt
 (ft/sec)
 =
 0.00438
 *
 $U^{0.78}$
 *
 $(18/M$
 $W)^{0.3}$
 3
 $U = 0.1$
 mile per
 hour
 from

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Emissions Unit ID: P033

USEPA
 example
 for
 indoor
 equipment
 A =
 Open
 area of
 Tank
 (square
 meters)
 P =
 Vapor
 Pressure
 of VOC
 (psia)
 H =
 Batch
 Time
 (hr/batc
 h)
 R =
 Univers
 al gas
 constant
 = 10.73
 psia*cu
 bic
 feet/lb-
 mole*R
 T =
 Batch
 Temper
 ature
 (R)
 N =
 Number
 of
 Batches
 per day

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Total emissions = Displacement Loss + Evaporation Loss

- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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control device, monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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and the actual organic compound emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day

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and the actual organic compound emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all

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3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable Compliance Method- Compliance

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nce shall be based upon the record keeping specified in Section III.1 and shall be the summation of the daily organic compound emission rates from the production of formation components in the TK J WIP tank for the calendar year, divided by 2,000 pounds per ton.

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- c. Emission Limitation-
311.2
lbs/day
OC,
combine
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n for
emissio
ns units
P024
through
P038

Applica
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Complia
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Method-
Complia
nce
shall be
determi
ned
based
upon
the
record
keeping
specifie
d in
Section
III.1 of
this
permit.

- d. Emission Limitation-
56.79
TPY

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OC,
combine
d
emissio
n
limitatio
n for
emissio
ns units
P024
through
P038

Applica
ble
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Complia
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based
upon
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Section
III.1 of
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Emissions Unit ID: P033

emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance

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nce with
the
overall
control
system
efficienc
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85% for
organic
compou
nds.

- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-

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10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Alternative U.S. EPA approved test methods may be used with

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prior
approval from
the
Ohio
EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not
later
than 30
days
prior to
the

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propose
d test
date(s),
the
permitted
shall
submit
an
"Intent
to Test"
notification
to the
appropriate
Ohio
EPA
District
Office
or local
air
agency.
The
"Intent
to Test"
notification
shall
describe
in detail
the
proposed
test
methods
and
procedures,
the
emissions
unit
operating
parameters

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ers, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the

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emission
test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing

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procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests

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and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio

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EPA
District
Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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PTI Application: 08 04127
Issued

Facility ID: 0855130356

Emissions Unit ID: P033

B. State Only Enforceable Section

I. 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>
P033 - Work in Progress Tank J (TK J WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P033) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration

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to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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Emissions Unit ID: P033

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P033

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

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the "Air
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Policy"
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change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P034

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P034 - Work in Progress Tank K (TK K WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07 (G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a

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Emissions Unit ID: P034

condens
er with
a
control
efficienc
y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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Emissio
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and Ink
Manufa
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Facilitie
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batch*;
evapora
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losses
(lbs) for
all
batches;
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lbs/day
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- i. the sum of the displacement and
- j. the total calculated controlled OC

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controlled OC
emission rate
shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance),
i.e., (i) multiplied by a factor of (1 - the overall control efficiency

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- k. the total calculated controlled OC emission rate for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = (0.01246 * S * P * MW * Q)/T = Loading emissions per day
 Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0
 from
 USEPA
 AP-42
 Chapter
 5 for
 bottom
 or
 submerged
 loading
 P =

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Emissions Unit ID: P034
 Vapor
 Pressure
 of the
 material
 loaded
 at
 tempera
 ture T
 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
 Batch
 Temper
 ature
 (R)

Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
 Gas-pha
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 (ft/sec)
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 0.00438
 *
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 3
 $U =$ 0.1
 mile per
 hour
 from
 USEPA

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example
for
indoor
equipme
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A =
Open
area of
Tank
(square
meters)
P =
Vapor
Pressure
of VOC
(psia)
H =
Batch
Time
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h)
R =
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al gas
constant
= 10.73
psia*cu
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mole*R
T =
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Temper
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N =
Number
of
Batches
per day

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Total emissions = Displacement Loss + Evaporation Loss

- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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control device, monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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Emissions Unit ID: P034

and the actual organic compound emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day

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Emissions Unit ID: P034

and the actual organic compound emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all

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Emissions Unit ID: P034

3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section

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Emissions Unit ID: P034

III.1 of this permit.

b. Emission Limitation-

6.50 TPY OC, for this emissions unit

Applicable Compliance Method- Compliance shall be based upon the record keeping specified in Section III.1 and shall be the summation of the daily organic compound emission rates from the

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PTI Application: 08 04127
Issued

Facility ID: 0855130356

Emissions Unit ID: P034
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d. Emission Limitation-

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Section III.1 of this permit and shall be the summation of the daily organic compound emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

2. Emissions Testing Requirement:

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The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined

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ned in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence

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- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio

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in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the

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Emissions Unit ID: P034

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Issued: To be entered upon final issuance

Emissions Unit ID: P034

data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results

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Emissions Unit ID: P034

of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submitta

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Emissions Unit ID: P034

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VI. Miscellaneous Requirements

None

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Emissions Unit ID: P034

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. 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>
P034 - Work in Progress Tank K (TK K WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P034) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P034
exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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that was
proposed in the
application and
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; 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 be 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.

The permittee shall collect, record, and retain

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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

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P035

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P035 - Work in Progress Tank L (TK L WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

- 2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a

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2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each batch;

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- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program"

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mVolume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate for all

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Emissions Unit ID: P035

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*Displacement = (0.01246 * S * P * MW *
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Emissions Unit ID: P035

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Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
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Emissions Unit ID: P035

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Emissions Unit ID: P035

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment

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Emissions Unit ID: P035

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:

a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compound

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Emissions Unit ID: P035

emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compound

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Emissions Unit ID: P035

emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

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Emissions Unit ID: P035

b. Emission Limitation-

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Emissions Unit ID: P035

components in the TKL WIP tank for the calendar year, divided by 2,000 pounds per ton.

c. Emission Limitation-

311.2 lbs/day OC, combined emission limitation for emissions units P024 through P038

Applicable Compliance Method-Compliance shall be determined based

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upon the record keeping specified in Section III.1 of this permit.

d. Emission Limitation-

56.79 TPY OC, combined emission limitation for emissions units P024 through P038

Applicable Compliance Method- Compliance shall be based upon the record keeping specified

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Emissions Unit ID: P035

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2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be

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Emissions Unit ID: P035

determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local

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Emissions Unit ID: P035

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Emissions Unit ID: P035

methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's

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Emissions Unit ID: P035

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Emissions Unit ID: P035

y to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s)

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Emissions Unit ID: P035

shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where

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VI. Miscellaneous Requirements

None

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Emissions Unit ID: P035

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B. State Only Enforceable Section

I. 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>
P035 - Work in Progress Tank L (TK L WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P035) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P035

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Emissions Unit ID: P035

Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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 handbo

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Emissions Unit ID: P035

ok
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

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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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P035

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

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Emissions Unit ID: P035

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Policy"
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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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PTI A

Emissions Unit ID: P036

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P036 - Work in Progress Tank M (TK M WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

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Emissions Unit ID: P036

condens
er with
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control
efficienc
y of
85% or
greater.

- 2.b** Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each batch of adhesives;
 - b. the total number of gallons of each batch;

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- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program

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mVolume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 1998, for each batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate shall be

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calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

k. the total calculated controlled OC emission rate for all

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Emissions Unit ID: P036

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*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight
 (lb/lb-mole)

S = 1.0
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 AP-42
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 Vapor
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Emissions Unit ID: P036

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 (psia)
 $Q =$
 Volume
 of
 material
 loaded
 (gal/day
)
 $T =$
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Evaporation = $MW * K * A * P * 3600 * H /$
 $R * T * N =$ evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

$K =$
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example
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A =
Open
area of
Tank
(square
meters)
P =
Vapor
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of VOC
(psia)
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h)
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N =
Number
of
Batches
per day

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Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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Emissions Unit ID: P036
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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day, and the actual organic compound

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emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day and the actual organic compound

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emissions for each such day.

c. An identification of each day formation components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

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- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section III.1 of this permit.

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b. Emission Limitation-

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2,000
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c. Emission Limitation-

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P038

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Emissions Unit ID: P036

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d. Emission Limitation-

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PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: P036

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divided
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2,000
pounds
per ton.

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Emissions Unit ID: P036

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be
conduct
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overall
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efficienc
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85% for
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- b. The control efficiency (i.e., the
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reductio
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mass
emissio
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the inlet
and
outlet of
the
control
system)
shall be

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determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential

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presence of interfering gases. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate

435

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Emissions Unit ID: P036

Ohio
EPA
District
Office
or local
air
agency.

Not
later
than 30
days
prior to
the
propose
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date(s),
the
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submit
an
"Intent
to Test"
notificat
ion to
the
appropri
ate
Ohio
EPA
District
Office
or local
air
agency.
The
"Intent
to Test"
notificat
ion shall

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Facility ID: 0855130356

Emissions Unit ID: P036

describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's

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or local
air
agency's
refusal
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test(s).

Personn
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Ohio
EPA
District
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or local
air
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test(s),
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y to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s)

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shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submission of the written report, where

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warrant
ed, with
prior
approval
from
the
appropriate
Ohio
EPA
District
Office
or local
air
agency.

VI. Miscellaneous Requirements

None

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PTI A

Emissions Unit ID: P036

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B. State Only Enforceable Section

I. 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>
P036 - Work in Progress Tank M (TK M WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. The permit to install for this emissions unit (P036) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

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Emissions Unit ID: P036

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level

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Emissions Unit ID: P036

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Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that 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:

- 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

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Emissions Unit ID: P036
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 material s, or use of new material s, that would result in an increase in emissions of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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Emissions Unit ID: P036

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

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applicati
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the "Air
Toxic
Policy"
for the
change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P037

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P037 - Work in Progress Tank N (TK N WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC emissions shall be controlled by employing a

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condens
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a
control
efficienc
y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

Emissions Unit ID: P037

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Preferre
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Estimati
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Emissio
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Paint
and Ink
Manufa
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Facilitie
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March
1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the controlled OC emission rate

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Emissions Unit ID: P037

shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1-the overall control efficiency);

- k. the total calculated controlled OC emission rate

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Emissions Unit ID: P037

for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day

Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0 from USEPA AP-42 Chapter 5 for bottom or submerged loading
P = Vapor Pressure of the material

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Emissions Unit ID: P037

loaded
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tempera
ture T
(psia)
Q =
Volume
of
material
loaded
(gal/day
)
T =
Batch
Temper
ature
(R)

Evaporation = $MW * K * A * P * 3600 * H / R * T * N$ = evaporation emissions per day
Where: MW = Molecular weight of species
(lb/lb-mole)

K =
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 $U^{0.78}$
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Emissions Unit ID: P037

USEPA
example
for
indoor
equipment
A =
Open
area of
Tank
(square
meters)
P =
Vapor
Pressure
of VOC
(psia)
H =
Batch
Time
(hr/batch)
R =
Universal gas
constant
= 10.73
psia*cubic
feet/lb-
mole*R
T =
Batch
Temperature
(R)
N =
Number
of
Batches
per day

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Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection)

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PTI A

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Emissions Unit ID: P037

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0

DAP I

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lbs/day,
and the
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- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2

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PTI A**

Emissions Unit ID: P037

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- 2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in

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Emissions Unit ID: P037
Section
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b. Emission Limitation-

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based upon the record keeping specified in Section III.1 of this permit.

d. Emission Limitation-

56.79 TPY OC, combined emission limitation for emissions units P024 through P038

Applicable Compliance Method-Compliance shall be based upon the record keeping

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specified in Section III.1 of this permit and shall be the summation of the daily organic compound emission rate, for the calendar year, from the production of formation components in the work in progress tanks identified as Tank A through Tank O, divided by 2,000 pounds per ton.

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Emissions Unit ID: P037

2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be
 - conduct ed to demonst rate complia nce with the overall control system efficienc y of 85% for organic compou nds.

- b. The control efficiency (i.e., the
 - percent reductio n in mass emissio ns between the inlet and outlet of the control system)

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shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential

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- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate

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Emissions Unit ID: P037

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ion shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may

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Emissions Unit ID: P037

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Emissions Unit ID: P037

on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time

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PTI A

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VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>
P037 - Work in Progress Tank N (TK N WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P037) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration

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to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its

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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:

- a. changes in the composition of the material s used (typicall y for coatings or cleanup material s), or the use of new material s, that would result in the emissio n of a compou nd with a lower Thresho ld Limit Value (TLV), as indicate d in the most recent version of the handbo

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- b. changes in the composition of the material s, or use of new material s, that would result in an increase in emissio ns of any pollutant with a listed TLV

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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 be 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.

The permittee shall collect, record, and retain

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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

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runs
that
show
the
results
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the "Air
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Policy"
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change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P038

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P038 - Work in Progress Tank O (TK O WIP Tank, Holding Tank for Adhesives), controlled by a condenser	OAC rule 3745-31-05(A)(3)	36.0 lbs organic compounds (OC)/day, 6.5 TPY OC (for this emissions unit) See 2.a See 2.b, combined emission limitations
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). The reduction requirement established pursuant to this rule is equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - 2.a The OC emissions shall be controlled by employing a

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y of
85% or
greater.

2.b Combined OC emissions from P024 through P038 (Work in Progress Tanks A through O) shall not exceed 311.2 lbs/day, and 56.79 TPY.

II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not be greater than 19 degrees F.
2. Formulations containing methylene chloride shall be processed in only two (2) work in progress tanks (Work in Progress Tanks A through O) at any time.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification for each

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- b. the total number of gallons of each batch of adhesives;
- c. the calculated vapor pressure of the material produced (psia) in each batch;
- d. the calculated molecular weight of the material produced (lb/lb-mole) in each batch;
- e. the batch temperature (R);
- f. the batch time (hr/batch);
- g. the open area of the tank (square meters);
- h. the determination of the displacement and evaporative losses in accordance with the formulas and assumptions given in the "US EPA Emission

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1998,
for each
batch*;

- i. the sum of the displacement and evaporative losses (lbs) for all batches;
- j. the total calculated controlled OC emission rate in lbs/day (the

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controlled OC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance), i.e., (i) multiplied by a factor of (1 - the overall control efficiency

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- k. the total calculated controlled OC emission rate for all work in progress tanks, emissions units P024 through P038, combined (this is the summation of (j) for emissions units P024 through P038);

*Displacement = $(0.01246 * S * P * MW * Q)/T$ = Loading emissions per day
 Where: MW = Vapor Molecular Weight (lb/lb-mole)

S = 1.0
 from
 USEPA
 AP-42
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 bottom
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 P =

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Vapor
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 material
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Evaporation = $MW * K * A * P * 3600 * H / R * T * N$ = evaporation emissions per day
 Where: MW = Molecular weight of species
 (lb/lb-mole)

K =
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Emissions Unit ID: P038

Total emissions = Displacement Loss +
Evaporation Loss

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The continuous monitoring and recording devices shall be capable of accurately measuring the desired parameters. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. The average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day.
- b. A log or record of operating time for the capture (collection) system,

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Emissions Unit ID: P038

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IV. Reporting Requirements

1. In accordance with paragraph A.1.c. of the General Terms and Conditions, the permittee shall submit quarterly deviation (excursion) reports which include the following information:

a. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives exceeded 36.0 lbs/day,

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and the actual organic compound emissions from each such day.

- b. An identification of each day during which the organic compound emission rate from the production of the formation component for the adhesives in work in process tanks identified as Tanks A through O exceeded 311.2 lbs/day

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and the actual organic compound emissions for each such day.

c. An identification of each day for formation of components containing methylene chloride were processed in more than two work in progress tanks (Work in Progress Tanks A through O), at any time.

2. The permittee shall submit temperature deviation (excursion) reports that identify all

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3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.

- 3. The permittee shall submit annual reports to the Director (Ohio EPA District Office or local air agency) for emissions units P024 through P038 (Work in Progress Tanks A through O) which summarize the actual annual OC emissions for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation-
36.0 lbs/day OC, for this emissions unit

Applicable Compliance Method- Compliance shall be determined based upon the record keeping specified in Section

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Emissions Unit ID: P038

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b. Emission Limitation-

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Emissions Unit ID: P038

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2. Emissions Testing Requirement:

The permittee shall conduct, or have conducted representative emission testing for the 15 WIP tanks identified as 0855130356 P024 through P038 (Tanks A through O) in accordance with the following requirements:

- a. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency of 85% for organic compounds.
- b. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be

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determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the organic species present and their total concentration, and on a consideration of the potential

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Emissions Unit ID: P038

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- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate

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Emissions Unit ID: P038

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Not
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an
"Intent
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to the
appropriate
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describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in

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the
Ohio
EPA
District
Office's
or local
air
agency's
refusal
to
accept
the
results
of the
emission
test(s).

Personnel from
the
appropriate
Ohio
EPA
District
Office
or local
air
agency
shall be
permitted to
witness
the
test(s),
examine
the
testing
equipment, and

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Emissions Unit ID: P038

acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the

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results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

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submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>
P038 - Work in Progress Tank O (TK O WIP Tank, Holding Tank for Adhesives), controlled by a condenser		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P038) was evaluated based on the actual materials specified by the permittee in the permit to install application. The emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's

DAP Inc**PTI Application: 08 04127****Issued****Facility ID: 0855130356**

Emissions Unit ID: P038
exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" each pollutant(s):

Pollutant: Toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,142

MAGLC (ug/m3): 4,486.8

Pollutant: Hexane

TLV (ug/m3): 1,762,370

Maximum Hourly Emission Rate (lbs/hr): 12.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3045

MAGLC (ug/m3): 4200

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3587

MAGLC (ug/m3): 4135

Physical changes to or changes in the method of operation of the emissions unit that its installation or modification could affect the parameters used to determine whether or not the "Air

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Emissions Unit ID: P038

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"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:

- 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

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Emissions Unit ID: P038

entitled
"American
Conference of
Governmental
Industrial
Hygienists
(ACGIH),"
than the
lowest
TLV
value
previously
modeled
;

- b. changes in the composition of the material
s, or use
of new
material
s, that
would
result in
an
increase
in
emissions
of
any
pollutant
with a
listed
TLV
that was

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Issued: To be entered upon final issuance

Emissions Unit ID: P038

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 be 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.

The permittee shall collect, record, and retain the following information when it conducts

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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 results

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Emissions Unit ID: P038

g
comput
er
model
runs
that
show
the
results
of the
applicati
on of
the "Air
Toxic
Policy"
for the
change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137 Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2 existing mastic mixers-Chapter 31 Modification replacing PTI 08-3642 issued April 16, 1997.

CITY/TWP Tipp City

SIC CODE 2851 SCC CODE 30101403 EMISSIONS UNIT ID P024

EMISSIONS UNIT DESCRIPTION Work In Progress Tank A (TK A WIP Tank, Holding Tank for Adhesives)controlled by a condenser

DATE INSTALLED April, 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES NOIDENTIFY THE AIR CONTAMINANTS: toluene, hexane and methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P025

EMISSIONS UNIT DESCRIPTION Work in Progress Tank B (TK B WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P026

EMISSIONS UNIT DESCRIPTION Work in Progress Tank C (TK C WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

methylene chloride, toluene, hexane

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P027

EMISSIONS UNIT DESCRIPTION Work in Progress Tank D (TK D WIP Tank, Holding Tank for Adhesives) controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Ctry

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P028

EMISSIONS UNIT DESCRIPTION Work in Progress Tank E (TK E WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NPSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P029

EMISSIONS UNIT DESCRIPTION Work in Progress Tank F (TK F WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

 NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P030

EMISSIONS UNIT DESCRIPTION Work in Progress Tank G (TK G WIP Tank, Holding Tank for Adhesives) controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Ctrv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P031

EMISSIONS UNIT DESCRIPTION Work in Progress Tank H (TK H WIP Tank, Holding Tank for Adhesives) controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm City

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P032

EMISSIONS UNIT DESCRIPTION Work in Progress Tank I (TK I WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

 NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P033

EMISSIONS UNIT DESCRIPTION Work in Progress Tank J (TK J WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

 NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Ciry

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P034

EMISSIONS UNIT DESCRIPTION Work in Progress Tank K (TK K WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P035

EMISSIONS UNIT DESCRIPTION Work in Progress Tank L (TK L WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

x

YES

 NO

IDENTIFY THE AIR CONTAMINANTS:

toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137 Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2 CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851 SCC CODE 30101403 EMISSIONS UNIT ID P036

EMISSIONS UNIT DESCRIPTION Work in Progress Tank M (TK M WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES NO

IDENTIFY THE AIR CONTAMINANTS: toluene, hexane, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137

Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2

CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851

SCC CODE 30101403

EMISSIONS UNIT ID P037

EMISSIONS UNIT DESCRIPTION Work in Progress Tank N (TK N WIP Tank, Holding Tank for Adhesives), controlled by a condenser

DATE INSTALLED

April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/day	36.0	6.5	36.0	6.5
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoringIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

yes

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

hexane, toluene, methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04137 Facility ID: 0855130356

FACILITY NAME DAP Inc

FACILITY DESCRIPTION 2 existing contact cement mixers & 2 CITY/TWP Timm Citv

Emissions Unit ID: P038

SIC CODE 2851 SCC CODE 30101403 EMISSIONS UNIT ID P038

EMISSIONS UNIT DESCRIPTION Work in Progress Tank O (TK O WIP Tank, Holding Tank for Adhesives) controlled by a condenser

DATE INSTALLED April 1997

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	lbs/hr	1.87	3.04	1.87	3.04
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination 85% control by a condenser, record keeping, and temperature monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES NO

IDENTIFY THE AIR CONTAMINANTS: hexane, toluene, methylene chloride