

Facility ID: 0855130356 Issuance type: Title V Proposed Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Coating Manufacturing NESHAP, 40 CFR Part 63, Subpart HHHHH. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002. The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Coating Manufacturing NESHAP, 40 CFR Part 63, Subpart HHHHH. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.
2. If the final NESHAP standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future U.S. EPA regulations:
 - a. for a new affected source, the anticipated date of startup of operation;
 - b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;
 - c. any existing federal, State, or local limitations or requirements applicable to the affected source;
 - d. for each affected emission point or group of affected emission points, an identification of control technology in place;
 - e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
 - f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63. The Part II application for a MACT determination may, but is not required to, contain the following information:
 - a. recommended emission limitations for the affected source and support information (the permittee may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation);
 - b. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and
 - c. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

If the final NESHAP standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future U.S. EPA regulations:

- a. for a new affected source, the anticipated date of startup of operation;
- b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;

- c. any existing federal, State, or local limitations or requirements applicable to the affected source;
- d. for each affected emission point or group of affected emission points, an identification of control technology in place;
- e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
- f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63.

The Part II application for a MACT determination may, but is not required to, contain the following information:

- a. recommended emission limitations for the affected source and support information (the permittee may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation);
 - b. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and
 - c. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.
3. If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:
- a. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):
 - i. the name and mailing address of the permittee;
 - ii. the physical location of the source if it is different from the mailing address;
 - iii. identification of the relevant MACT standard and the source's compliance date;
 - iv. a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard and the types of HAPs emitted; and
 - v. a statement confirming the facility is a major source for HAPs.
 - b. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:
 - i. the methods used to determine compliance;
 - ii the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - iv. the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;
 - v. an analysis demonstrating whether the affected source is a major source or an area source;
 - vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and
 - vii. a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.

If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:

- a. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):
 - i. the name and mailing address of the permittee;
 - ii. the physical location of the source if it is different from the mailing address;
 - iii. identification of the relevant MACT standard and the source's compliance date;
 - iv. a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard

and the types of HAPs emitted; and

- v. a statement confirming the facility is a major source for HAPs.

b. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:

- i. the methods used to determine compliance;
 - ii the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - iv. the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;
 - v. an analysis demonstrating whether the affected source is a major source or an area source;
 - vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and
 - vii. a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.
4. The emissions of hazardous air pollutants (HAPs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, shall not exceed 9.9 TPY for any individual HAP, as a rolling, 12-month summation, and 24.9 TPY for any combination of HAPs, as a rolling, 12-month summation. The emissions of hazardous air pollutants (HAPs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, shall not exceed 9.9 TPY for any individual HAP, as a rolling, 12-month summation, and 24.9 TPY for any combination of HAPs, as a rolling, 12-month summation.
5. The permittee shall use the calculation methodologies found in the STAPPA/ALAPCO-EPA document, "Emission Inventory Improvement Program (EIIP), Volume II: Chapter 8, Preferred and Alternative Methods For Estimating Air Emissions From Paint and Ink Manufacturing Facilities," Updated March 2002, to estimate HAP emissions for this facility. The following calculations shall be performed for each batch of paint and adhesive that is processed at the facility:
- a. The HAP emissions from material additions (displacement losses) to the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023) and from transfers to the let-down tanks (emissions unit P005), work-in-progress tanks (emissions units P024, P025, P026, P027, P028, P029, P030, P031, P032, P033, P034, P035, and P036), and packaging equipment (emissions units P041, P042, P043, P044, P045, and P046) shall be calculated in accordance with equation 8.4-1 of the above-referenced document.
 - b. The HAP emissions due to surface evaporation from the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023), let-down tanks (emissions unit P005), and work-in-progress tanks (emissions units P024, P025, P026, P027, P028, P029, P030, P031, P032, P033, P034, P035, and P036) shall be calculated in accordance with equation 8.4-18 of the above-referenced document.
 - c. The HAP emissions from heat-up caused by internal friction (no heat is applied and no exothermic reactions occur) during the mixing process in the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023) and let-down tanks (emissions unit P005), shall be calculated in accordance with equation 8.4-14 of the above-referenced document.
 - d. For any emissions unit that has a condenser, the actual emission rate shall be determined by multiplying the uncontrolled emission rate by the control efficiency measured during the most recent stack test that showed the emissions unit in compliance with its allowable hourly emission rate.
 - e. The HAP emissions from bulk liquid storage of raw materials shall be calculated using the latest version of the U.S. EPA, TANKS program or equivalent calculations from U.S. EPA publication AP-42, Chapter 7 on a monthly basis. The permittee shall use the calculation methodologies found in the STAPPA/ALAPCO-EPA document, "Emission Inventory Improvement Program (EIIP), Volume II: Chapter 8, Preferred and Alternative Methods For Estimating Air Emissions From Paint and Ink Manufacturing Facilities," Updated March 2002, to estimate HAP emissions for this facility. The following calculations shall be performed for each batch of paint and adhesive that is processed at the facility:
 - a. The HAP emissions from material additions (displacement losses) to the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023) and from transfers to the let-down tanks (emissions unit P005), work-in-progress tanks (emissions units P024, P025, P026, P027, P028, P029, P030, P031, P032, P033, P034, P035, and P036), and packaging equipment (emissions units P041, P042, P043, P044, P045, and P046) shall be calculated in accordance with equation 8.4-1 of the above-referenced document.
 - b. The HAP emissions due to surface evaporation from the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023), let-down tanks (emissions unit P005), and work-in-progress tanks (emissions units P024, P025, P026, P027, P028, P029, P030, P031, P032, P033, P034, P035, and P036) shall be calculated in accordance with equation 8.4-18 of the above-referenced document.
 - c. The HAP emissions from heat-up caused by internal friction (no heat is applied and no exothermic reactions occur) during the mixing process in the paint and adhesive mixers (emissions units P012, P014, P015, P016, P020, P021, P022, and P023) and let-down tanks (emissions unit P005), shall be calculated in

accordance with equation 8.4-14 of the above-referenced document.

d. For any emissions unit that has a condenser, the actual emission rate shall be determined by multiplying the uncontrolled emission rate by the control efficiency measured during the most recent stack test that showed the emissions unit in compliance with its allowable hourly emission rate.

e. The HAP emissions from bulk liquid storage of raw materials shall be calculated using the latest version of the U.S. EPA, TANKS program or equivalent calculations from U.S. EPA publication AP-42, Chapter 7 on a monthly basis.

6. The permittee shall keep records for the entire facility each month of the following information:

a. The name of each HAP received and processed.

b. The quantity, in pounds or tons, of each HAP received or processed.

c. The quantity, in pounds or tons, of all the HAPs received or processed.

d. The total facility-wide emissions (and associated calculations) for each individual HAP, in pounds or tons per year (calculated by summing the individual HAP emission rates from all the emissions units at the facility).

e. The total facility-wide emissions (and associated calculations) for all combined HAPs, in pounds or tons per year (calculated by summing all combined HAPs emission rates from all the emissions units at the facility).

f. The rolling 12-month summation of the total individual HAP emissions rates for each HAP from all the emissions units at the facility, in tons.

g. The rolling 12-month summation of the total combined HAP emissions rates from all the emissions units at the facility, in tons.

The permittee shall keep records for the entire facility each month of the following information:

a. The name of each HAP received and processed.

b. The quantity, in pounds or tons, of each HAP received or processed.

c. The quantity, in pounds or tons, of all the HAPs received or processed.

d. The total facility-wide emissions (and associated calculations) for each individual HAP, in pounds or tons per year (calculated by summing the individual HAP emission rates from all the emissions units at the facility).

e. The total facility-wide emissions (and associated calculations) for all combined HAPs, in pounds or tons per year (calculated by summing all combined HAPs emission rates from all the emissions units at the facility).

f. The rolling 12-month summation of the total individual HAP emissions rates for each HAP from all the emissions units at the facility, in tons.

g. The rolling 12-month summation of the total combined HAP emissions rates from all the emissions units at the facility, in tons.

7. The permittee shall submit quarterly deviation (excursion) reports, in accordance with Part I of the GeneralTerms and Conditions, Section A.I.c. of this permit, of the following information:

a. An identification of each month during which the rolling, 12-month individual HAP emissions rate (from the facility) exceeded 9.9 tons, and the actual rolling, 12-month summation of each individual HAP emissions rate (from the facility) for each such month.

b. An identification of each month during which the rolling, 12-month combination of all HAP emissions rates (from the facility) exceeded 24.9 tons, and the actual rolling, 12-month summation of the combination of all HAP emissions rates (from the facility) for each such month.

The permittee shall submit quarterly deviation (excursion) reports, in accordance with Part I of the GeneralTerms and Conditions, Section A.I.c. of this permit, of the following information:

a. An identification of each month during which the rolling, 12-month individual HAP emissions rate (from the facility) exceeded 9.9 tons, and the actual rolling, 12-month summation of each individual HAP emissions rate (from the facility) for each such month.

b. An identification of each month during which the rolling, 12-month combination of all HAP emissions rates (from the facility) exceeded 24.9 tons, and the actual rolling, 12-month summation of the combination of all HAP emissions rates (from the facility) for each such month.

8. The permittee shall submit annual reports that summarize the annual emissions of each individual HAP and the combined emissions of all the HAPs for the facility. These reports shall cover the previous calendar year and shall be submitted by January 31 of each year.

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b **State Only Enforceable Section**

1. The following insignificant emissions units are located at this facility:

B003 Boiler # 2
 B004 Boiler # 1
 P002 Ball Mill # 2
 P007 Half Pint Filling- Paint Filling Line
 P009 Gallon Paint Fill Line
 P011 Aerosol Line
 P017 Mixer 215
 P018 Mixer 216
 P039 Powdered Mineral Silo, controlled by fabric filters identified as Z040A and Z040B
 P040 Daptex Charger for the Charging of Aerosol Cans with Propellant
 P047 CC1 Mixer Powdered Mineral Bag Dump Station
 P048 Mastic Mixer Powdered Mineral Bag Dump Station
 P049 CC2 Mixer Powdered Mineral Bag Dump Station
 P050 Aerosol Charger for the Charging of Aerosol Cans with Propellant
 R001 QC Spray Booths
 T027 TK2 12,000-gallon Toluene Aboveground Storage Tank
 T028 TK-03 12,000-gallon Vertical Fixed Roof Textile Spirits Storage Tank
 T029 TK-04 12,000-gallon Vertical Fixed Roof Textile Spirits Storage Tank
 T030 TK-01 12,000-gallon Vertical Fixed Roof Acetone Storage Tank
 Z014 Tank Cleaning Station
 Z016 Tank 5A Med. Oil Alkyd Storage Tank
 Z017 TK5B Vinyl Toluene Alkyd Storage Tank
 Z018 TK6A Lactol Spirits Storage Tank
 Z020 TK7A Mineral Spirits Storage Tanks
 Z021 TK7B V,M,&P Naptha Storage Tank
 Z022 TK8A Aromatic Hydrocarbon Storage Tank
 Z023 TK8B MEK Storage Tank
 Z024 White Glue Storage Tank
 Z025 Yellow Glue Storage Tank
 Z026 DAPTEX Storage Tanks
 Z027 Piping Components
 Z028 Emergency Generator 285HP
 Z032 Packaging Line 1 and 3 oz CC
 Z035 Hand Filling of 5 gallon Pails
 Z041 Simplex 1
 Z043 Glue Handfill Line
 Z044 Sand Mill 1
 Z045 Sand Mill 2
 Z046 Sand Mill 3
 Z047 Sand Mill 4
 Z048 Sand Mill 5
 Z049 Daptex Pre-Stage Mixer
 Z051 Daptex Aerosol Filling Line
 Z052 Hand Fill of 55-gallon Drum
 Z054 Flecto Gallon Line
 Z055 Flecto Quart Line
 Z056 Daptex Latex - 4 Tank
 Z057 Paint Mixer 7
 Z058 Paint Mixer 8
 Z059 Diesel Fire Pump
 Z060 D-15 totes
 Z061 latex tank
 Z062 clay slurry tank
 Z063 Spensol tank
 Z064 Rhoplex tank
 Z065 Tufflo oil tank
 Z066 Resin tank
 Z067 4000 low-VOC tank
 Z068 Myers mixer

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

The following insignificant emissions units are located at this facility:

B003 Boiler # 2
 B004 Boiler # 1
 P002 Ball Mill # 2
 P007 Half Pint Filling- Paint Filling Line
 P009 Gallon Paint Fill Line
 P011 Aerosol Line
 P017 Mixer 215
 P018 Mixer 216
 P039 Powdered Mineral Silo, controlled by fabric filters identified as Z040A and Z040B
 P040 Daptex Charger for the Charging of Aerosol Cans with Propellant
 P047 CC1 Mixer Powdered Mineral Bag Dump Station
 P048 Mastic Mixer Powdered Mineral Bag Dump Station
 P049 CC2 Mixer Powdered Mineral Bag Dump Station
 P050 Aerosol Charger for the Charging of Aerosol Cans with Propellant
 R001 QC Spray Booths
 T027 TK2 12,000-gallon Toluene Aboveground Storage Tank
 T028 TK-03 12,000-gallon Vertical Fixed Roof Textile Spirits Storage Tank
 T029 TK-04 12,000-gallon Vertical Fixed Roof Textile Spirits Storage Tank

T030 TK-01 12,000-gallon Vertical Fixed Roof Acetone Storage Tank
Z014 Tank Cleaning Station
Z016 Tank 5A Med. Oil Alkyd Storage Tank
Z017 TK5B Vinyl Toluene Alkyd Storage Tank
Z018 TK6A Lactol Spirits Storage Tank
Z020 TK7A Mineral Spirits Storage Tanks
Z021 TK7B V,M,&P Naptha Storage Tank
Z022 TK8A Aromatic Hydrocarbon Storage Tank
Z023 TK8B MEK Storage Tank
Z024 White Glue Storage Tank
Z025 Yellow Glue Storage Tank
Z026 DAPTEX Storage Tanks
Z027 Piping Components
Z028 Emergency Generator 285HP
Z032 Packaging Line 1 and 3 oz CC
Z035 Hand Filling of 5 gallon Pails
Z041 Simplex 1
Z043 Glue Handfill Line
Z044 Sand Mill 1
Z045 Sand Mill 2
Z046 Sand Mill 3
Z047 Sand Mill 4
Z048 Sand Mill 5
Z049 Daptex Pre-Stage Mixer
Z051 Daptex Aerosol Filling Line
Z052 Hand Fill of 55-gallon Drum
Z054 Flecto Gallon Line
Z055 Flecto Quart Line
Z056 Daptex Latex - 4 Tank
Z057 Paint Mixer 7
Z058 Paint Mixer 8
Z059 Diesel Fire Pump
Z060 D-15 totes
Z061 latex tank
Z062 clay slurry tank
Z063 Spensol tank
Z064 Rhoplex tank
Z065 Tufflo oil tank
Z066 Resin tank
Z067 4000 low-VOC tank
Z068 Myers mixer

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

- [Go to Part III for Emissions Unit P005](#)
- [Go to Part III for Emissions Unit P012](#)
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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0855130356 Emissions Unit ID: P005 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P005 - Let-down Paint Tanks 220, 221, 222, 227 and 229	OAC rule 3745-31-05(A)(3) PTI 08-04233	2.31 lbs organic compounds (OC)/hr, 17.28 lbs OC/day, and 3.20 tons/yr OC
2. Additional Terms and Conditions		
(a) None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for each let-down paint tank (Tank 220, Tank 221, Tank 222, Tank 227 and Tank 229) associated with this emissions unit:
 - a. the company identification for each batch of product mixed/stored;
 - b. the number of hours of operation;
 - c. the number of gallons mixed/stored of each product;
 - d. the number of batches of each product mixed/stored;
 - e. the calculated vapor pressure (psia) of the product;
 - f. the calculated vapor molecular weight (lb/lb-mole) of each product;
 - g. the average temperature of each let-down tank when in operation (degrees R);
 - h. the open area of each tank (square feet);
 - i. the partial pressure of each VOC in each vessel head space (psia);
 - j. the calculated gas vapor pressure in each vessel (psia);
 - k. the average initial gas temperature (degrees R) and final gas temperature (degrees R);
 - l. the determination of the displacement, evaporation, point source, and heat up OC losses for each product mixed/stored in each let-down tank (in pounds) [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002].
 - m. the total calculated OC emission rate for this emissions unit [the summation of OCs for all the let down tanks, 220, 221, 222, 227, and 229, combined, for all the products], in pounds; and
 - n. the average hourly OC emission rate (m/b), in pounds.

$$\text{displacement loss (lbs/batch)} = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)**

$$\text{evaporation loss (lbs/batch)} = (MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{.33}]$
 U = 0.1 mile per hour, from USEPA's example
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft²)

$$\text{point source loss (lbs/day)} = (Ed) \times (Qex) \times (Tex) / (\text{Batch volume})$$

where:

Qex = volumetric exhaust rate (24.23 gallons/minute)
 Tex = the length of time the exhaust fan is running during dry material addition (assume 5 min per batch)

$$\text{heat up loss (lbs/batch)} = [(PxT1/14.7 - PxT1) + (PxT2/14.7 - PxT2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - PxT1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - PxT2)$
 T1 = initial gas temperature (degrees R)*
 T2 = final gas temperature (degrees R)*

*The mixing processes occur at ambient temperature. No heat is applied, no exothermic reactions occur and no appreciable amount of internal friction is generated.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall

submit quarterly deviation (excursion) reports that include the following information:

- a. An identification of each day during which the average hourly organic compound emissions from the mixing and/or storing of materials exceeded 2.31 pounds per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the mixing and/or storing of materials exceeded 17.28 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
2.31 lbs OC/hr

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
17.28 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
3.20 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be determined based upon the record keeping requirements in Section A.III.1. and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P005 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
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P005 - Let-down Paint Tanks 220, 221, 222, none
227, and 229 none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit (P005) 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: Methanol

TLV (ug/m3): 262,090

Maximum Hourly Emission Rate (lbs/hr): 1.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 46.13

MAGLC (ug/m3): 6240

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

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

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P012 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P012 - No. 1 and No. 2 Cowles Small Paint Mixers	OAC rule 3745-31-05(A)(3) PTI 08-04233	1.28 lbs organic compounds (OC)/hr, 30.72 lbs/day and 5.60 tons/yr OC
2. Additional Terms and Conditions		
(a) None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall collect and record the following information on a daily basis for each paint mixer (Mixer 1 and Mixer 2) associated with this emissions unit:
 - a. the company identification for each batch of product mixed/stored;
 - b. the number of hours of operation;
 - c. the number of gallons mixed/stored of each product;
 - d. the number of batches of each product mixed/stored;
 - e. the calculated vapor pressure (psia) of the product;
 - f. the calculated vapor molecular weight (lb/lb-mole) of each product;

- g. the average temperature of each mixer when in operation (degrees R);
- h. the open area of each mixer (square feet);
- i. the partial pressure of each VOC in each vessel head space (psia);
- j. the calculated gas vapor pressure in each vessel (psia);
- k. the average initial gas temperature (degrees R) and final gas temperature (degrees R);
- l. the determination of the displacement, evaporation, point source, and heat up OC losses for each product mixed/stored in each mixer (in pounds) [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 2002]
- m. the total calculated OC emission rate for this emissions unit [the summation of OCs for all the mixers, mixers 1 and 2, combined, for all the products], in pounds; and
- n. the average hourly OC emission rate (m/b), in pounds.

$$\text{displacement loss (lbs/batch)} = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{evaporation loss (lbs/batch)} = (MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{.33}]$
 U = 0.1 mile per hour, from USEPA's example
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft^2)

$$\text{point source loss (lbs/batch)} = (Ed) \times (Qex) \times (Tex) / (\text{Batch volume})$$

where:

Qex = volumetric exhaust rate (24.23 gallons/minute)
 Tex = the length of time the exhaust fan is running during dry material addition (assume 5 min per batch)

$$\text{heat up loss (lbs/batch)} = [(PxT1/14.7 - PxT1) + (PxT2/14.7 - PxT2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - PxT1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - PxT2)$
 T1 = initial gas temperature (degrees R)*
 T2 = final gas temperature (degrees R)*

*The mixing processes occur at ambient temperature. No heat is applied, no exothermic reactions occur and no appreciable amount of internal friction is generated.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the mixing of materials exceeded 1.28 pounds per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the mixing of materials exceeded 30.72 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
1.28 lbs OC/hr

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
30.72 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
5.6 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P012 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P012 - No. 1 and No. 2 Cowles Small Paint Mixers	none	none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit (P012) 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P014 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P014 - Cowles 450-gallon paint mixer No. 4 with fabric filter	OAC rule 3745-31-05(A)(3) PTI 08-04307	0.53 lb organic compounds (OC)/hr, 6.37 lbs OC/day, and 1.16 tons/yr OC
		0.069 lb/hr particulate emissions (PE)
	OAC rule 3745-17-11(B)(1)	Visible PE shall not exceed 5% opacity, as a six-minute average.
	OAC rule 3745-17-07(A)(1)	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- (a) None

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II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained at not less than 0.5 inch of water while the emissions unit is in operation.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. the company identification for each batch of product mixed/stored;
 - b. the number of hours of operation;
 - c. the number of gallons mixed/stored of each product;
 - d. the number of batches of each product mixed/stored;
 - e. the calculated vapor pressure (psia) of the product;
 - f. the calculated vapor molecular weight (lb/lb-mole) of each product;
 - g. the average temperature of the mixer when in operation (degrees R);
 - h. the open area of the mixer (square feet);
 - i. the partial pressure of each VOC in each vessel head space (psia);
 - j. the calculated gas vapor pressure in each vessel (psia);
 - k. the average initial gas temperature (degrees R) and final gas temperature (degrees R);
 - l. the determination of the displacement, evaporation, point source, and heat up OC losses for each product mixed/stored in the mixer (in pounds) [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002]

- m. the total calculated OC emission rate for this emissions unit [the summation of OCs (from section 1.I) for all the products], in pounds; and
 n. the average hourly OC emission rate (m/b), in pounds.

$$\text{displacement loss (lbs/batch)} = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{Evaporation loss (lbs/batch)} = (MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3)/(\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft^2)

$$\text{point source loss (lbs/batch)} = (Ed) \times (Qex) \times (Tex) / (\text{Batch volume})$$

where:

Qex = volumetric exhaust rate (24.23 gallons/minute)
 Tex = the length of time the exhaust fan is running during dry material addition (assume 5 min per batch)

$$\text{heat up loss (lbs/batch)} = [(PxT1/14.7 - PxT1) + (PxT2/14.7 - PxT2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - PxT1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - PxT2)$
 T1 = initial gas temperature (degrees R)*
 T2 = final gas temperature (degrees R)*

*The mixing processes occur at ambient temperature. No heat is applied, no exothermic reactions occur and no appreciable amount of internal friction is generated.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the mixing of materials exceeded 0.53 pound per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the mixing of materials exceeded 6.37 pounds per day, and the actual organic compound emissions for each such day.
 - c. An identification of all periods of time during which the pressure drop across the fabric filter was not maintained at the required level specified in section A.II.1 of this permit.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
0.53 lb OC/hr

Applicable Compliance Method-

Compliance with the hourly allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.

- b. Emission Limitation-
6.37 lbs OC/day

Applicable Compliance Method-

Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.

- c. Emission Limitation-
1.16 tons/yr OC

Applicable Compliance Method-

Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000.

- d. Emission Limitation-
0.069 lb/hr PE

Applicable Compliance Method-

Compliance with the hourly allowable PE limitation may be determined by multiplying the maximum hourly pigment usage (0.34 ton/hr) by the AP-42, Section 6.4, Table 6.4-1 (revised 1/95) emission factor of 20 lbs PE/ton of pigment used, and then by the fabric filter control factor of (1-0.99).*

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation pursuant to Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

*The fabric filter efficiency is assumed to be 99%.

- e. Emission Limitation-
Visible PE shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method-

If required, compliance shall be determined by visible emissions evaluations performed in accordance with USEPA Reference Method 9 of 40 CFR, Part 60, Appendix A.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P014 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P014 - Cowles 450-gallon paint mixer No. 4, with fabric (particulate) filter	none	none

- 2. **Additional Terms and Conditions**

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene

TLV (mg/m3): 188

Maximum Hourly Emission Rate (lbs/hr): 1.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 490

MAGLC (ug/m3): 4,486

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P015 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P015 - Cowles 450-gallon paint mixer No. 5 with fabric filter	OAC rule 3745-31-05(A)(3) PTI 08-04307	0.53 lb organic compounds (OC)/hr, 6.37 lbs OC/day, and 1.16 tons/yr OC
		0.069 lb/hr particulate emissions (PE)
		Visible PE shall not exceed 5% opacity, as a six-minute average.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

- (a) None

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II. **Operational Restrictions**

1. The pressure drop across the fabric filter shall be maintained at not less than 0.5 inch of water while the emissions unit is in operation.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. the company identification for each batch of product mixed/stored;
 - b. the number of hours of operation;
 - c. the number of gallons mixed/stored of each product;
 - d. the number of batches of each product mixed/stored;
 - e. the calculated vapor pressure (psia) of the product;
 - f. the calculated vapor molecular weight (lb/lb-mole) of each product;

- g. the average temperature of the mixer when in operation (degrees R);
- h. the open area of the mixer (square feet);
- i. the partial pressure of each VOC in each vessel head space (psia);
- j. the calculated gas vapor pressure in each vessel (psia);
- k. the average initial gas temperature (degrees R) and final gas temperature (degrees R);
- l. the determination of the displacement, evaporation, point source, and heat up OC losses for each product mixed/stored in the mixer (in pounds) [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", March 2002]
- m. the total calculated OC emission rate for this emissions unit [the summation of OCs (from section 1.l) for all the products], in pounds; and
- n. the average hourly OC emission rate (m/b), in pounds.

$$\text{displacement loss (lbs/batch)} = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{Evaporation loss (lbs/batch)} = (MW) \times (K) \times (A) \times (P) \times (3600) \times (H) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft^2)

$$\text{point source loss (lbs/batch)} = (Ed) \times (Qex) \times (Tex) / (\text{Batch volume})$$

where:

Qex = volumetric exhaust rate (24.23 gallons/minute)
 Tex = the length of time the exhaust fan is running during dry material addition (assume 5 min per batch)

$$\text{heat up loss (lbs/batch)} = [(PxT1/14.7 - PxT1) + (PxT2/14.7 - PxT2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - PxT1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - PxT2)$
 T1 = initial gas temperature (degrees R)*
 T2 = final gas temperature (degrees R)*

*The mixing processes occur at ambient temperature. No heat is applied, no exothermic reactions occur and no appreciable amount of internal friction is generated.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the mixing of materials exceeded 0.53 pound per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the mixing of materials exceeded 6.37 pounds per day, and the actual organic compound emissions for each such day.
 - c. An identification of all periods of time during which the pressure drop across the fabric filter was not maintained at the required level specified in section A.II.1 of this permit.

2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
0.53 lb OC/hr

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.37 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
1.16 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000.
 - d. Emission Limitation-
0.069 lb/hr PE

Applicable Compliance Method-
Compliance with the hourly allowable PE limitation may be determined by multiplying the maximum hourly pigment usage (0.34 ton/hr) by the AP-42, Section 6.4, Table 6.4-1 (revised 1/95) emission factor of 20 lbs PE/ton of pigment used, and then by the fabric filter control factor of (1-0.99).

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation pursuant to Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

*The fabric filter efficiency is assumed to be 99%.
 - e. Emission Limitation-
Visible PE shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method-
If required, compliance shall be determined by visible emissions evaluations performed in accordance with USEPA Reference Method 9 of 40 CFR, Part 60, Appendix A.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P015 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P015 - Cowles 450-gallon paint mixer No. 5, with fabric filter	none	none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene

TLV (mg/m3): 188

Maximum Hourly Emission Rate (lbs/hr): 1.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 490

MAGLC (ug/m3): 4,486

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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IV. **Reporting Requirements**

- 1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P016 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P016 - Cowles 450-gallon paint mixer No. 6 with fabric filter	OAC rule 3745-31-05(A)(3) PTI 08-04307	0.53 lb organic compounds (OC)/hr, 6.37 lbs OC/day, and 1.16 tons/yr OC
		0.069 lb/hr particulate emissions (PE)
		Visible PE shall not exceed 5% opacity, as a six-minute average.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- (a) None

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II. **Operational Restrictions**

- 1. The pressure drop across the fabric filter shall be maintained at not less than 0.5 inch of water while the emissions unit is in operation.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. the company identification for each batch of product mixed/stored;
 - b. the number of hours of operation;
 - c. the number of gallons mixed/stored of each product;
 - d. the number of batches of each product mixed/stored;
 - e. the calculated vapor pressure (psia) of the product;
 - f. the calculated vapor molecular weight (lb/lb-mole) of each product;
 - g. the average temperature of the mixer when in operation (degrees R);
 - h. the open area of the mixer (square feet);
 - i. the partial pressure of each VOC in each vessel head space (psia);
 - j. the calculated gas vapor pressure in each vessel (psia);
 - k. the average initial gas temperature (degrees R) and final gas temperature (degrees R);
 - l. the determination of the displacement, evaporation, point source, and heat up OC losses for each product mixed/stored in the mixer (in pounds) [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002];
 - m. the total calculated OC emission rate for this emissions unit [the summation of OCs (from section 1.l) for all the products], in pounds; and
 - n. the average hourly OC emission rate (m/b), in pounds.

displacement loss (lbs/batch) = $(0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

Evaporation loss (lbs/batch) = $(MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft²)

point source loss (lbs/batch) = $(Ed) \times (Q_{\text{ex}}) \times (T_{\text{ex}}) / (\text{Batch volume})$

where:

Q_{ex} = volumetric exhaust rate (24.23 gallons/minute)
 T_{ex} = the length of time the exhaust fan is running during dry material addition (assume 5 min per batch)

heat up loss (lbs/batch) = $[(P \times T_1 / 14.7 - P \times T_2) + (P \times T_2 / 14.7 - P \times T_2)] \times (0.5) \times (n) \times (MW)$

where:

n = lb-moles of gas displaced, $[(V/R) \times (P_{a1}/T_1 - P_{a2}/T_2)]$
 P_xT₁ = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 P_xT₂ = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 P_{a1} = initial gas pressure in vessel (psia), calculated as $(14.7 - P \times T_1)$
 P_{a2} = final gas pressure in vessel (psia), calculated as $(14.7 - P \times T_2)$
 T₁ = initial gas temperature (degrees R)*
 T₂ = final gas temperature (degrees R)*

*The mixing processes occur at ambient temperature. No heat is applied, no exothermic reactions occur and no appreciable amount of internal friction is generated.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the mixing of materials exceeded 0.53 pound per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the mixing of materials exceeded 6.37 pounds per day, and the actual organic compound emissions for each such day.
 - c. An identification of all periods of time during which the pressure drop across the fabric filter was not maintained at the required level specified in section A.II.1 of this permit.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
0.53 lb OC/hr

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.37 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
1.16 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000.
 - d. Emission Limitation-
0.069 lb/hr PE

Applicable Compliance Method-
Compliance with the hourly allowable PE limitation may be determined by multiplying the maximum hourly pigment usage (0.34 ton/hr) by the AP-42, Section 6.4, Table 6.4-1 (revised 1/95) emission factor of 20 lbs PE/ton of pigment used, and then by the fabric filter control factor of (1-0.99).*

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation pursuant to Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

*The fabric filter efficiency is assumed to be 99%.
 - e. Emission Limitation-
Visible PE shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method-
If required, compliance shall be determined by visible emissions evaluations performed in accordance with USEPA Reference Method 9 of 40 CFR, Part 60, Appendix A.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P016 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P016 - Cowles 450-gallon paint mixer No. 6, with fabric filter	none	none
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene

TLV (mg/m3): 188

Maximum Hourly Emission Rate (lbs/hr): 1.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 490

MAGLC (ug/m3): 4,486

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a

modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0855130356 Emissions Unit ID: P020 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P020 - MM1 Mastics Mixer No. 1, equipped with a condenser	OAC rule 3745-31-05(A)(3) PTI 08-3642	38.09 lbs organic compounds (OC)/day, and 2.87 tons/yr OC

2. Additional Terms and Conditions

- (a) None

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not exceed 62 degrees Fahrenheit.
2. The permittee shall not process methylene chloride formulations in this emissions unit.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. The company identification for each batch of product mixed.
 - b. The volume, in gallons, of each batch mixed.
 - c. The calculated vapor pressure of the material produced in each batch (psia).
 - d. The calculated vapor molecular weight of the material produced in each batch (lb/lb-mole).
 - e. The average temperature of the mixer when in operation (degrees R).
 - f. The batch time (hours/batch).
 - g. The open area of the mixer (square feet).
 - h. The partial pressure of each VOC in each mixer head space (psia).
 - i. The calculated gas vapor pressure in each mixer (psia).
 - j. The average initial and final gas temperatures (degrees R).
 - k. The determination of the displacement, evaporation, and heat up OC losses mixed/stored in the mixer for each batch, in pounds, [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002].
 - l. The total calculated before-control OC emission rate for this emissions unit [the summation of the displacement, evaporation, and heat up OC losses for all batches], in pounds.
 - m. The total calculated controlled OC emission rate for this emissions unit, in pounds per day [the value calculated in (l) multiplied by a control efficiency of 82% ($1 \times (1-0.82)$) per the condenser design evaluation conducted according to equations in 40 CFR 63.1257(d)].
 - n. Documentation of whether or not the products mixed in this emissions unit contain methylene chloride.

$$* \text{ Displacement loss (lbs/batch) } = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)

S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill

MW = vapor molecular weight (lb/lb-mole)

Q = volume of material loaded (gallons)

T = temperature (degrees R)

$$\text{Evaporation loss (lbs/batch) } = (MW) \times (K) \times (A) \times (P) \times (3600) / (H) \times (R) \times (T)$$

where:

$$K = (0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$$

U = 0.1 mile per hour, from USEPA's example for indoor equipment

H = Batch Time (hours/batch)

R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$

A = open area of tank (ft^2)

$$\text{Heat up loss (lbs/batch) } = [(PxT1/14.7 - PxT1) + (PxT2/14.7 - PxT2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$

PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)

PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)

V = vessel head space (ft^3)

Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - PxT1)$

Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - PxT2)$

T1 = initial gas temperature (degrees R)

T2 = final gas temperature (degrees R)

2. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within +/- 1 percent of the temperature being measured or +/-5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall collect and record the following information each day for the condenser:

- a. The average temperature of the exhaust gases from the condenser during each of the eight 3-hour blocks of time during the day.
- b. A log or record of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of mastic materials exceeded 38.09 pounds per day, and the actual organic compound emissions for each such day.
 - b. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
 - c. An identification of each day during which methylene chloride formulations were processed.
2. The permittee shall submit annual reports to the Director (local air agency) that 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.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
38.09 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
2.87 tons/yr OC

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000 pounds/ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P020 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2. Additional Terms and Conditions		
1. None		

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0855130356 Emissions Unit ID: P021 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P021 - MM1 Mastics Mixer No. 2, equipped with a condenser	OAC rule 3745-31-05(A)(3) PTI 08-3642	38.09 lbs organic compounds (OC)/day, and 2.87 tons/yr OC
2. Additional Terms and Conditions		
(a) None		

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not exceed 62 degrees Fahrenheit.
2. The permittee shall not process methylene chloride formulations in this emissions unit.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. The company identification for each batch of product mixed.
 - b. The volume, in gallons, of each batch mixed.
 - c. The calculated vapor pressure of the material produced in each batch (psia).
 - d. The calculated vapor molecular weight of the material produced in each batch (lb/lb-mole).
 - e. The average temperature of the mixer when in operation (degrees R).
 - f. The batch time (hours/batch).
 - g. The open area of the mixer (square feet).
 - h. The partial pressure of each VOC in each mixer head space (psia).
 - i. The calculated gas vapor pressure in each mixer (psia).
 - j. The average initial and final gas temperatures (degrees R).
 - k. The determination of the displacement, evaporation, and heat up OC losses mixed/stored in the mixer for each batch, in pounds, [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002].
 - l. The total calculated before-control OC emission rate for this emissions unit [the summation of the displacement, evaporation, and heat up OC losses for all batches], in pounds.
 - m. The total calculated controlled OC emission rate for this emissions unit, in pounds per day [the value calculated in (l) multiplied by a control efficiency of 82% (1 x (1-0.82)) per the condenser design evaluation conducted according to equations in 40 CFR 63.1257(d)].
 - n. Documentation of whether or not the products mixed in this emissions unit contain methylene chloride.

$$* \text{ Displacement loss (lbs/batch) } = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{Evaporation loss (lbs/batch) } = (MW) \times (K) \times (A) \times (P) \times (3600) \times (H) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia}) \times (\text{ft}^3) / (\text{lb-mole}) \times (\text{degrees R})]$
 A = open area of tank (ft²)

$$\text{Heat up loss (lbs/batch) } = [(P \times T1 / 14.7 - P \times T1) + (P \times T2 / 14.7 - P \times T2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 P x T1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 P x T2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 V = vessel head space (ft³)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - P \times T1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - P \times T2)$
 T1 = initial gas temperature (degrees R)
 T2 = final gas temperature (degrees R)

2. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within +/- 1 percent of the temperature being measured or +/-5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall collect and record the following information each day for the condenser:
 - a. The average temperature of the exhaust gases from the condenser during each of the eight 3-hour blocks of time during the day.
 - b. A log or record of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of mastic materials exceeded 38.09 pounds per day, and the actual organic compound emissions for each such day.
 - b. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
 - c. An identification of each day during which methylene chloride formulations were processed.
2. The permittee shall submit annual reports to the Director (local air agency) that 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.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
38.09 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
2.87 tons/yr OC

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000 pounds/ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P021 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2. Additional Terms and Conditions		
1. None		

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. None

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P022 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

control measures (if any) may 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>
P022 - CM1 Contact Cement Mixer No. 1, with condenser	OAC rule 3745-31-05(A)(3) PTI 08-3642	30.4 lbs organic compounds (OC)/day, and 1.69 tons/yr OC
2. Additional Terms and Conditions		
(a) None		

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time, shall not exceed 57 degrees Fahrenheit.
2. The permittee shall not process methylene chloride formulations in this emissions unit.

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. The company identification for each batch of product mixed.
 - b. The volume, in gallons, of each batch mixed.
 - c. The calculated vapor pressure of the material produced in each batch (psia).
 - d. The calculated vapor molecular weight of the material produced in each batch (lb/lb-mole).
 - e. The average temperature of the mixer when in operation (degrees R).
 - f. The batch time (hours/batch).
 - g. The open area of the mixer (square feet).
 - h. The partial pressure of each VOC in each mixer head space (psia).
 - i. The calculated gas vapor pressure in each mixer (psia).
 - j. The average initial and final gas temperatures (degrees R).
 - k. The determination of the displacement, evaporation, and heat up OC losses mixed/stored in the mixer for each batch, in pounds, [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002].
 - l. The total calculated before-control OC emission rate for this emissions unit [the summation of the displacement, evaporation, and heat up OC losses for all batches], in pounds.
 - m. The total calculated controlled OC emission rate for this emissions unit, in pounds per day, [the value calculated in (l) multiplied by a control efficiency of 76% (1 x(1-0.76))] per the condenser design evaluation conducted according to equations in 40 CFR 63.1257(d).
 - n. Documentation on whether or not the products mixed in this emissions unit contain methylene chloride.

* Displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

- P = vapor pressure of material loaded (psia)
- S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
- MW = vapor molecular weight (lb/lb-mole)
- Q = volume of material loaded (gallons)
- T = temperature (degrees R)

Evaporation loss (lbs/day) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

- K = (0.00438)x(U^0.78)x[(18/MW)^0.33]
- U = 0.1 mile per hour, from USEPA's example for indoor equipment
- H = Batch Time (hours/batch)
- R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
- A = open area of tank (ft^2)

Heat up loss (lbs/batch) = [(PxT1/14.7-PxT1) + (PxT2/14.7 - PxT2)]x(0.5)x(n)x(MW)

where:

$n = \text{lb-moles of gas displaced, } [(V/R)(Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 V = vessel head space (ft³)
 Pa1 = initial gas pressure in vessel (psia), calculated as (14.7 - PxT1)
 Pa2 = final gas pressure in vessel (psia), calculated as (14.7 - PxT2)
 T1 = initial gas temperature (degrees R)
 T2 = final gas temperature (degrees R)

2. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within +/- 1 percent of the temperature being measured or +/-5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall collect and record the following information each day for the condenser:
 - a. The average temperature of the exhaust gases from the condenser during each of the eight 3-hour blocks of time during the day.
 - b. A log or record of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of mastic materials exceeded 30.4 pounds per day, and the actual organic compound emissions for each such day.
 - b. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
 - c. An identification of each day during which methylene chloride formulations were processed.
2. The permittee shall submit annual reports to the Director (RAPCA) that 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.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
30.4 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
1.69 tons/yr OC

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000 pounds/ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P022 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2. Additional Terms and Conditions			
1.	None		

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. None

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0855130356 Emissions Unit ID: P023 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P023 - CM2 Contact Cement Mixer No. 2, with primary and secondary condensers and carbon adsorption canisters	OAC rule 3745-31-05(A)(3) PTI 08-3642	30.4 lbs organic compounds (OC)/day, and 1.69 tons/yr OC

2. **Additional Terms and Conditions**

- (a) None

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the primary condenser, for any 3-hour block of time, shall not exceed 57 degrees Fahrenheit.
2. When processing methylene chloride formulations in this emissions unit the permittee shall employ a secondary condenser and activated carbon canister for tertiary emissions control.
3. When processing methylene chloride formulations, the average temperature of the exhaust gases from the secondary condenser, for any 3-hour block of time, shall not exceed 23 degrees Fahrenheit.
4. When processing methylene chloride formulations, The permittee shall install and operate a new 180 lb activated carbon canister capable of removing 18 lbs of methylene chloride emissions from the mixer exhaust stream for tertiary air emissions control prior to processing each batch of methylene chloride formulations in this emissions unit.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information on a daily basis for this emissions unit:
 - a. The company identification for each batch of product mixed.
 - b. The volume, in gallons, of each batch mixed.
 - c. The calculated vapor pressure of the material produced in each batch (psia).
 - d. The calculated vapor molecular weight of the material produced in each batch (lb/lb-mole).
 - e. The average temperature of the mixer when in operation (degrees R).
 - f. The batch time (hours/batch).
 - g. The open area of the mixer (square feet).
 - h. The partial pressure of each VOC in each mixer head space (psia).
 - i. The calculated gas vapor pressure in each mixer (psia).
 - j. The average initial and final gas temperatures (degrees R).
 - k. The determination of the displacement, evaporation, and heat up OC losses mixed/stored in the mixer for each batch, in pounds, [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002].
 - l. The total calculated before-control OC emission rate for this emissions unit [the summation of the displacement, evaporation, and heat up OC losses for all batches], in pounds.
 - m. The total calculated controlled OC emission rate for this emissions unit, in pounds per day, [the value calculated in (l) multiplied by a control efficiency of 99% (1 x (1-0.99))] per the condenser design evaluation conducted according to equations in 40 CFR 63.1257(d) and removal efficiency of 18 pounds of methylene chloride per 180 pounds of activated carbon as specified by the activated carbon manufacturer].
 - n. Documentation of whether or not the products mixed in this emissions unit contain methylene chloride.
 - o. The identification number of each new activated carbon canister that is installed prior to processing methylene chloride formulations in this emissions unit.

$$* \text{ Displacement loss (lbs/batch) } = (0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{Evaporation loss (lbs/batch) } = (MW) \times (K) \times (A) \times (P) \times (3600) / (H) \times (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{0.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft²)

$$\text{Heat up loss (lbs/batch) } = [(P \times T1 / 14.7 - P \times T1) + (P \times T2 / 14.7 - P \times T2)] \times (0.5) \times (n) \times (MW)$$

where:

n = lb-moles of gas displaced, $[(V/R) \times (Pa1/T1 - Pa2/T2)]$
 PxT1 = partial pressure of each VOC in vessel head space at initial gas temperature (psia)
 PxT2 = partial pressure of each VOC in vessel head space at final gas temperature (psia)
 V = vessel head space (ft³)
 Pa1 = initial gas pressure in vessel (psia), calculated as $(14.7 - P \times T1)$
 Pa2 = final gas pressure in vessel (psia), calculated as $(14.7 - P \times T2)$
 T1 = initial gas temperature (degrees R)
 T2 = final gas temperature (degrees R)

2. The permittee shall operate and maintain a continuous temperature monitor and recorder that:
 - a. Measures and records the temperature of the exhaust gases from the primary condenser when the emissions unit is in operation.
 - b. Measures and records the temperature of the exhaust gases from the secondary condenser on this emissions unit when methylene chloride formulations are being processed in this emissions unit.

The temperature shall be recorded in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within +/- 1 percent of the temperature being measured or +/- 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall collect and record the following information each day for the primary and secondary condensers:
 - a. The average temperature of the exhaust gases from the condenser during each of the eight 3-hour blocks of time during the day.
 - b. A log or record of the downtime for the capture (collection) system, control devices, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each day during which the organic compound emission rate from the production of mastic materials exceeded 30.4 pounds per day, and the actual organic compound emissions for each such day.
 - b. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the primary and secondary condensers exceeded the temperature limitation specified above.
 - c. An identification of each day during which methylene chloride formulations were processed without the use of the secondary condenser and activated carbon canister.
 - d. An identification of any days when methylene chloride batches were processed without the installation of a new activated canister.
2. The permittee shall submit annual reports to the Director (RAPCA) that 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.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.

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V. **Testing Requirements**

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
30.4 lbs OC/day

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
1.69 tons/yr OC

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily organic compound emission rates for the calendar year, divided by 2000 pounds/ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P023 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2. Additional Terms and Conditions			
1.	None		

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P024 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank A (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
- f. the batch time (hours/batch);
- g. the open area of the tank (square feet);
- h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
- i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
- j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1 - 0.75); and
- k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
MW = vapor molecular weight (lb/lb-mole)
Q = volume of material loaded (gallons)
T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
U = 0.1 mile per hour, from USEPA's example for indoor equipment
H = Batch Time (hours/batch)
R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
A = open area of tank (ft^2)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P024 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank A (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

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

permittee shall obtain a final permit to install prior to the change.

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

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P025 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank B (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.

2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = $(0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = $(MW) \times (K) \times (A) \times (P) \times (3600) / (H) \times (R) \times (T)$

where:

$K = (0.00438) \times (U^{0.78}) \times [(18/MW)^{.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft²)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this

emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.

- b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
 3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. **Testing Requirements**

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P025 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank B (holding tanks for mastics and contact cements), with condenser	none	none

2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit 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 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

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

determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

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

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P026 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank C (holding tanks for mastics and contact cements), with condenser | OAC rule 3745-31-05(A)(3)
PTI 08-04137 | 36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit)

See A.I.2.a below. |
|--|---|---|
2. **Additional Terms and Conditions**
- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. **Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
MW = vapor molecular weight (lb/lb-mole)
Q = volume of material loaded (gallons)
T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
U = 0.1 mile per hour, from USEPA's example for indoor equipment
H = Batch Time (hours/batch)
R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
A = open area of tank (ft^2)
2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
 3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.

4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P026 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank C (holding tanks for mastics and contact cements), with condenser	none	none
2. Additional Terms and Conditions		
<ol style="list-style-type: none"> 1. None 		

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit 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 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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:":
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P027 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank D (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

- P = vapor pressure of material loaded (psia)
- S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
- MW = vapor molecular weight (lb/lb-mole)
- Q = volume of material loaded (gallons)
- T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

$K = (0.00438)(U^{0.78})(18/MW)^{.33}$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, [(10.73 psia)(ft³)/(lb-mole)(degrees R)]
 A = open area of tank (ft²)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was is in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic

compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.

- c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
- d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P027 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank D (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

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

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P028 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank E (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. **Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;

- i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
- j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1 - 0.75); and
- k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
MW = vapor molecular weight (lb/lb-mole)
Q = volume of material loaded (gallons)
T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
U = 0.1 mile per hour, from USEPA's example for indoor equipment
H = Batch Time (hours/batch)
R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
A = open area of tank (ft^2)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. **Testing Requirements**

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P028 Issuance type: Title V Proposed Permit

B. **State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank E (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P029 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank F (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
- 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 (degrees R);
- f. the batch time (hours/batch);
- g. the open area of the tank (square feet);
- h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
- i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
- j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%, i.e., (i) multiplied by a factor of (1- 0.75); and
- k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = $(0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = $(MW) \times (K) \times (A) \times (P) \times (3600) \times (H) / (R) \times (T)$

where:

K = $(0.00438) \times (U \wedge 0.78) \times [(18/MW) \wedge .33]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft²)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.

- d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. **Testing Requirements**

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P029 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank F (holding tanks for mastics and contact cements), with condenser	none	none

2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in

emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

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

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P030 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank G (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
MW = vapor molecular weight (lb/lb-mole)
Q = volume of material loaded (gallons)
T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
U = 0.1 mile per hour, from USEPA's example for indoor equipment
H = Batch Time (hours/batch)
R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
A = open area of tank (ft^2)
2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
 3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
 4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
36.0 lbs OC/day, for this emissions unit

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P030 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank G (holding tanks for mastics and contact cements), with condenser	none	none

2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. The permit to install for this emissions unit 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 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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P031 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank H (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. **Additional Terms and Conditions**

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. **Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1 - 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)/(H)x(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
 A = open area of tank (ft^2)
2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC

emission rates (from section III.1.j) for emissions units P024 through P036].

3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
36.0 lbs OC/day, for this emissions unit

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.

- d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P031 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank H (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:":
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P032 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank I (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

$$\text{evaporation loss (lbs/batch)} = (MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft^2)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
 36.0 lbs OC/day, for this emissions unit

 Applicable Compliance Method-
 Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.

- b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
- c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
- d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P032 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank I (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit 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 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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. **Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P033 Issuance type: Title V Proposed Permit

A. **State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank J (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. **Additional Terms and Conditions**

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. **Operational Restrictions**

- 1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
- 2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. **Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);

h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;

i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and

j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and

k. documentation of whether or not the formulation components processed contain methylene chloride.

displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)

S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill

MW = vapor molecular weight (lb/lb-mole)

Q = volume of material loaded (gallons)

T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]

U = 0.1 mile per hour, from USEPA's example for indoor equipment

H = Batch Time (hours/batch)

R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]

A = open area of tank (ft^2)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. **Testing Requirements**

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P033 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank J (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P034 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank K (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1 - 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = $(0.01246) \times (S) \times (P) \times (MW) \times (Q) / (T)$

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = $(MW) \times (K) \times (A) \times (P) \times (3600) / (R) \times (T)$

where:

K = $(0.00438) \times (U^{0.78}) \times [(18/MW)^{.33}]$
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, $[(10.73 \text{ psia})(\text{ft}^3) / (\text{lb-mole})(\text{degrees R})]$
 A = open area of tank (ft^2)
2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.

- d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. **Testing Requirements**

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

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P034 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank K (holding tanks for mastics and contact cements), with condenser	none	none

2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit 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 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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in

emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

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

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IV. Reporting Requirements

- 1. None

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V. Testing Requirements

- 1. None

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P035 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank L (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. Additional Terms and Conditions

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. Operational Restrictions

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1- 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)(H)/(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
 A = open area of tank (ft^2)

2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC emission rates (from section III.1.j) for emissions units P024 through P036] .
3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
36.0 lbs OC/day, for this emissions unit

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.
 - d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P035 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank L (holding tanks for mastics and contact cements), with condenser	none	none

2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. The permit to install for this emissions unit 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 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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P036 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank M (holding tanks for mastics and contact cements), with condenser	OAC rule 3745-31-05(A)(3) PTI 08-04137	36 lbs OC/day, 6.5 tons/yr OC (for this emissions unit) See A.I.2.a below.

2. **Additional Terms and Conditions**

- a. The OC emissions from emissions units P024 through P036 (Work-in-Progress Tanks A through M), combined, shall not exceed 311.2 lbs/day and 56.79 tons/yr.

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II. **Operational Restrictions**

1. The average temperature of the exhaust gases from the condenser, for any 3-hour block of time during which a batch was transferred, shall not be greater than 23.0 degrees F when processing methylene chloride formulations and not greater than 35.6 degrees F when processing other adhesive formulations.
2. Formulations containing methylene chloride shall be processed in only 2 work-in-progress tanks (Work-in-Progress Tanks A through M) at any one time.

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III. **Monitoring and/or Record Keeping 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;
 - 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 (degrees R);
 - f. the batch time (hours/batch);
 - g. the open area of the tank (square feet);
 - h. the determination of the displacement and evaporative OC losses, in pounds [in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities", updated March 2002], for each batch;
 - i. the sum of the displacement and evaporative losses of OC, in pounds, for all the batches; and
 - j. the total calculated controlled OC emissions, in pounds/day (the controlled OC emission rate shall be calculated by multiplying the uncontrolled emissions rate by a control efficiency of 75%), i.e., (i) multiplied by a factor of (1 - 0.75); and
 - k. documentation of whether or not the formulation components processed contain methylene chloride.
displacement loss (lbs/batch) = (0.01246)x(S)x(P)x(MW)x(Q)/(T)

where:

P = vapor pressure of material loaded (psia)
 S = 1.0, on the basis that the vapor space is saturated with vapors, submerged fill
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gallons)
 T = temperature (degrees R)

evaporation loss (lbs/batch) = (MW)x(K)x(A)x(P)x(3600)/(H)x(R)x(T)

where:

K = (0.00438)x(U ^0.78)x[(18/MW)^.33]
 U = 0.1 mile per hour, from USEPA's example for indoor equipment
 H = Batch Time (hours/batch)
 R = universal gas constant, [(10.73 psia)(ft^3)/(lb-mole)(degrees R)]
 A = open area of tank (ft^2)
2. The permittee shall collect and record for each day the total calculated controlled OC emission rate for emissions units P024 through P036, combined, in pounds [this is calculated by summing the daily OC

emission rates (from section III.1.j) for emissions units P024 through P036].

3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. The temperature shall be recorded 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.
4. 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 the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the total calculated controlled OC emissions from this emissions unit exceeded 36.0 lbs/day, and the actual OC emissions for each such day.
 - b. An identification of each day during which the total calculated controlled OC emissions from the work in process tanks identified as Tanks A through M exceeded 311.2 lbs/day, and the total calculated controlled OC emissions for each such day.
 - c. An identification of all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified in section A.II.1 of the terms and conditions for this emissions unit.
 - d. An identification of each day that the processing of methylene chloride formulations occurred in more than 2 work-in-progress tanks.
2. The permittee shall submit annual reports to the Director (local air agency) that summarize the total calculated controlled annual OC emissions for this emissions unit and for emissions units P024 through P036, combined. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly summaries that include the following:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the emissions unit was in operation.
 - b. An identification of all time periods during which formulation components containing methylene chloride were processed in this emissions unit.

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V. Testing Requirements

1. Compliance with the emission limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
36.0 lbs OC/day, for this emissions unit

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
6.50 tons/yr OC, for this emissions unit

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit and shall be the summation of the daily calculated organic compound emission rates (from section A.III.1.) for the calendar year, divided by 2000 pounds per ton.
 - c. Emission Limitation-
311.2 lbs OC/day, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the daily OC emission limitation shall be determined based upon the record keeping requirements specified in Sections A.III.1. and 2. of this permit.

- d. Emission Limitation-
56.79 tons/yr OC, for emissions units P024 through P036, combined

Applicable Compliance Method-
Compliance with the annual OC emission limitation shall be based upon the record keeping requirements specified in Sections A.III.1 and 2. of this permit and shall be the summation of the daily calculated controlled organic compound emission rates, from section A.III.2. for the calendar year, divided by 2000 pounds per ton.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P036 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 (WIP) Tanks A through M, Tank M (holding tanks for mastics and contact cements), with condenser	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

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

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P041 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P041 - Large Elgin Can Filler Located at the Contact Cements Packaging Line	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 5.7 lbs organic compounds (OC)/hr and 62.50 lbs OC/day on any day when employing any photochemically reactive material: 5.7 lbs OC/hr and 40 lbs OC/day 11.40 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. Additional Terms and Conditions

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;
 - g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
 - h. the average temperature of the product packaged (degrees R);**
 - i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*
 - j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*

k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);

l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);

m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and

n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities," updated March 2002.

displacement losses (lb/day) = $(0.01246)(S)(P)(MW)(Q)/T$

Where:

P = vapor pressure of material loaded (psia)

S = 0.5 on the basis that the material is loaded into a clean container

MW = vapor molecular weight (lb/lb-mole)

Q = volume of material loaded (gal)

T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 5.7 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 62.50 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 5.7 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 5.7 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
 - 62.50 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.

- d. Emission Limitation-
11.40 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P041 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P041 - Large Elgin Can Filler Located at the Contact Cements Packaging Line	none	none
2. Additional Terms and Conditions		
1. None		

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit (P041) 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: MEK

TLV (ug/m3): 589,770

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 33.32

MAGLC (ug/m3): 14,042

2. 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 handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of a listed pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: P042 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P042 - Small Elgin Can Filler located at the Packaging Line for Contact Cements and Mastics	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 4.8 lbs organic compounds (OC)/hr and 62.50 lbs OC/day on any day when employing any photochemically reactive material: 4.8 lbs OC/hr and 40 lbs OC/day 11.40 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. Additional Terms and Conditions

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;
 - g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
 - h. the average temperature of the product packaged (degrees R);**
 - i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*
 - j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*
 - k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);
 - l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);
 - m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and
 - n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II:

Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities,"updated March 2002.

$$\text{displacement losses (lb/day)} = (0.01246)(S)(P)(MW)(Q)/T$$

Where:

P = vapor pressure of material loaded (psia)
 S = 0.5 on the basis that the material is loaded into a clean container
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gal)
 T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 4.8 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 62.50 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 4.8 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 4.8 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
 - 62.50 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - d. Emission Limitation-
 - 11.40 tons/yr OC

Applicable Compliance Method-
 Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. Miscellaneous Requirements

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P042 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P042 - Small Elgin Can Filler located at the Packaging Line for Contact Cements and Mastics	none	none

2. Additional Terms and Conditions

- 1. None

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II. Operational Restrictions

- 1. None

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III. Monitoring and/or Record Keeping Requirements

- 1. The permit to install for this emissions unit 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: MEK

TLV (ug/m3): 589,770

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 33.32

MAGLC (ug/m3): 14,042

Pollutant: Hexane

TLV (ug/m3): 176,200

Maximum Hourly Emission Rate (lbs/hr): 3.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 123

MAGLC (ug/m3): 41,952

Pollutant: Methanol

TLV (ug/m3): 262,090

Maximum Hourly Emission Rate (lbs/hr): 1.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 46.13

MAGLC (ug/m3): 6240

2. 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 handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P043 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P043 - 55-Gallon Drum Filler located at the Packaging Line for Contact Cements	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 4.8 lbs organic compounds (OC)/hr and 62.50 lbs OC/day on any day when employing any photochemically reactive material: 4.8 lbs OC/hr and 40 lbs OC/day 21.16 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. Additional Terms and Conditions

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;
 - g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
 - h. the average temperature of the product packaged (degrees R);**
 - i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*
 - j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*
 - k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);
 - l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);

m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and

n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities," updated March 2002.

displacement losses (lb/day) = $(0.01246)(S)(P)(MW)(Q)/T$

Where:

P = vapor pressure of material loaded (psia)
 S = 0.5 on the basis that the material is loaded into a clean container
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gal)
 T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 4.8 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 62.50 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 4.8 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 4.8 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
 - 62.50 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - d. Emission Limitation-
 - 21.16 tons/yr OC

Applicable Compliance Method-
 Compliance with the annual allowable OC emission limitation shall be based upon the record keeping

requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P043 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P043 - 55-Gallon Drum Filler located at the Packaging Line for Contact Cements	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: MEK

TLV (ug/m3): 589,770

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 33.32

MAGLC (ug/m3): 14,042

Pollutant: Hexane

TLV (ug/m3): 176,200

Maximum Hourly Emission Rate (lbs/hr): 3.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 123

MAGLC (ug/m3): 41,952

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 10.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 330.6

MAGLC (ug/m3): 4135

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

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. Miscellaneous Requirements

1. None

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Facility ID: 0855130356 Emissions Unit ID: P044 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P044 - 5-Gallon Pail Filler located at the Packaging Line for Contact Cements	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 5.4 lbs organic compounds (OC)/hr and 115.9 lbs OC/day on any day when employing any photochemically reactive material: 5.4 lbs OC/hr and 40 lbs OC/day 21.15 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. Additional Terms and Conditions

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;
 - g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
 - h. the average temperature of the product packaged (degrees R);**
 - i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*

j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*

k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);

l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);

m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and

n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities," updated March 2002.

displacement losses (lb/day) = $(0.01246)(S)(P)(MW)(Q)/T$

Where:

P = vapor pressure of material loaded (psia)

S = 0.5 on the basis that the material is loaded into a clean container

MW = vapor molecular weight (lb/lb-mole)

Q = volume of material loaded (gal)

T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 5.4 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 115.9 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 5.4 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 5.4 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
 - 115.9 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping

requirements specified in Section A.III.1. of this permit.

- d. Emission Limitation-
21.15 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P044 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P044 - 5-Gallon Pail Filler located at the Packaging Line for Contact Cements	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: MEK

TLV (ug/m3): 589,770

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 33.32

MAGLC (ug/m3): 14,042

Pollutant: Hexane

TLV (ug/m3): 176,200

Maximum Hourly Emission Rate (lbs/hr): 3.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 123

MAGLC (ug/m3): 41,952

Pollutant: Methylene Chloride

TLV (ug/m3): 173,680

Maximum Hourly Emission Rate (lbs/hr): 10.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 330.6

MAGLC (ug/m3): 4135

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

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.

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

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IV. Reporting Requirements

1. None

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V. Testing Requirements

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0855130356 Emissions Unit ID: P045 Issuance type: Title V Proposed Permit

A. **State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P045 - 4-Stem Prosys Filler	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 2.84 lbs organic compounds (OC)/hr and 69.62 lbs OC/day on any day when employing any photochemically reactive material: 2.84 lbs OC/hr and 40 lbs OC/day 12.7 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. **Additional Terms and Conditions**

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;

- g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
- h. the average temperature of the product packaged (degrees R);**
- i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*
- j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*
- k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);
- l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);
- m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and
- n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities," updated March 2002.

$$\text{displacement losses (lb/day)} = (0.01246)(S)(P)(MW)(Q)/T$$

Where:

P = vapor pressure of material loaded (psia)
 S = 0.5 on the basis that the material is loaded into a clean container
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gal)
 T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 2.84 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 69.62 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.1.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 2.84 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 2.84 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping

requirements specified in Section A.III.1. of this permit.

- c. Emission Limitation-
69.62 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
- d. Emission Limitation-
12.7 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P045 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P045 - 4-Stem Prosys Filler	none	none
2. Additional Terms and Conditions		
1. None		

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: Hexane

TLV (ug/m3): 176,200

Maximum Hourly Emission Rate (lbs/hr): 3.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 123

MAGLC (ug/m3): 41,952

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

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

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

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

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IV. Reporting Requirements

- None

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V. Testing Requirements

- None

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VI. Miscellaneous Requirements

- None

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Facility ID: 0855130356 Emissions Unit ID: P046 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P046 - 3-Stem Prosys Filler	OAC rule 3745-31-05(A)(3) PTI 08-04233	on any day when employing only non-photochemically reactive materials: 5.16 lbs organic compounds (OC)/hr and 72.54 lbs OC/day on any day when employing any photochemically reactive material: 5.16 lbs OC/hr and 40 lbs OC/day 13.24 tons/yr (for photochemically reactive and non-photochemically reactive materials, combined)

2. Additional Terms and Conditions

- a. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information on a daily basis for the large elgin can filler :
 - a. the company identification for each product packaged;
 - b. for each day during which any photochemically reactive material is employed, the number of hours of operation;
 - c. for each day during which no photochemically reactive materials are employed, the number of hours of operation;
 - d. for each day during which any photochemically reactive material is employed, the total number of gallons employed;
 - e. for each day during which no photochemically reactive materials are employed, the number of gallons employed;
 - f. the calculated vapor pressure (psia) of each product packaged;
 - g. the calculated vapor molecular weight (lb/lb-mole) of each product packaged;
 - h. the average temperature of the product packaged (degrees R);**
 - i. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, of each product packaged (see below);*
 - j. for each day during which no photochemically reactive materials are employed, the OC emissions, in pounds, of each product packaged (see below);*
 - k. for each day during which any photochemically reactive material is employed, the OC emissions, in pounds, for all the products packaged (summation of i for all products);

- l. for each day during which no photochemically reactive materials are employed, the OC emission, in pounds, for all the products packaged (summation of j for all products);
- m. for each day during which any photochemically reactive material is employed, the average hourly OC emissions (k/b), in pounds/hr (average); and

n. for each day during which no photochemically reactive materials are employed, the average hourly OC emissions (l/c), in pounds/hr (average).

* Displacement emissions losses (lbs/batch) for each product packaged are determined in accordance with the formulas and assumptions given in the "US EPA Emission Inventory Improvement Program Volume II: Chapter 8, Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities," updated March 2002.

displacement losses (lb/day) = $(0.01246)(S)(P)(MW)(Q)/T$

Where:

P = vapor pressure of material loaded (psia)
 S = 0.5 on the basis that the material is loaded into a clean container
 MW = vapor molecular weight (lb/lb-mole)
 Q = volume of material loaded (gal)
 T = temperature (degrees R)

** based on the temperature of the product as it exits the mixer.

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IV. Reporting Requirements

1. In accordance with Paragraph A.1.c. of the General Terms and Conditions of this permit, the permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. On any day when any material (i.e., photochemically reactive material or non-photochemically material) was packaged, an identification of each day during which the average hourly organic compound emissions exceeded 5.16 lbs/hr, and the actual average hourly organic compound emissions for each such day.
 - b. On any day when any photochemically reactive material was packaged, an identification of each day during which the organic compound emissions exceeded 40.0 lbs/day, and the actual average hourly organic compound emissions for each such day.
 - c. On any day when only non-photochemically reactive materials were packaged, an identification of each day during which the organic compound emissions from the packaging of the products exceeded 72.54 lbs/day, and the actual average hourly organic compound emissions for each such day.
2. The permittee shall submit annual reports to the Director (local air agency) that 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 limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations-
 - 5.16 lbs OC/hr (on any day when employing only non-photochemically reactive materials)
 - 5.16 lbs OC/hr (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the hourly allowable OC emission limitations shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - b. Emission Limitation-
 - 40 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - c. Emission Limitation-
 - 72.54 lbs OC/day (on any day when employing only any photochemically reactive material)

Applicable Compliance Method-
 Compliance with the daily allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.
 - d. Emission Limitation-
 - 12.7 tons/yr OC

Applicable Compliance Method-

Compliance with the annual allowable OC emission limitation shall be based upon the record keeping requirements specified in Section A.III.1. and shall be the summation of the daily organic compound emission rates, divided by 2000.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0855130356 Emissions Unit ID: P046 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
2.	Additional Terms and Conditions		
1.	None	none	none

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II. **Operational Restrictions**

- 1. None

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III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit 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 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): 188,400

Maximum Hourly Emission Rate (lbs/hr): 4.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 135.8

MAGLC (ug/m3): 4485.0

Pollutant: Hexane

TLV (ug/m3): 176,200

Maximum Hourly Emission Rate (lbs/hr): 3.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 123

MAGLC (ug/m3): 41,952

2. 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 handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will 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.
3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: T031 Issuance type: Title V Proposed Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
T031 - 6,000-gallon fixed roof methylene chloride storage tank (TK 6B)	OAC rule 3745-31-05(A)(3) PTI 08-04307 OAC rule 3745-21-09(L)	3.19 tons/yr organic compounds (OC) exempt (See A.I.2.a. below.)

2. **Additional Terms and Conditions**

- a. In accordance with OAC rule 3745-21-09(L)(2), this storage tank is exempt from the requirements of OAC rule 3745-21-09(L)(1), because the tank has a capacity of less than 40,000 gallons.

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II. **Operational Restrictions**

1. The maximum annual throughput of methylene chloride for this emissions unit shall not exceed 2,190,000 gallons.

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall perform annual inspections of the white paint finish of the storage tank and make repairs, when necessary, to maintain the white tank finish in good condition.
2. The permittee shall maintain monthly records of the methylene chloride throughput, in gallons.

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IV. **Reporting Requirements**

1. The permittee shall submit annual reports that summarize the actual annual throughput of methylene chloride 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 in section A.I.1. of these terms and conditions shall be determined in accordance with the following method:
 - a. Emission Limitation-
3.19 tons/yr OC

Applicable Compliance Method-
Compliance with the annual allowable OC emission limitation shall be demonstrated based upon the record keeping requirements specified in Section A.III.2. of this permit, and the formulas provided in AP-42 Chapter 7, Organic Liquid Storage Tanks, Section 7.1.3.1., Total Losses from Fixed Roof Tanks (9/1997) or the "Tanks Version 4.09" software program.
 - b. Emission Limitation-
2,190,000 gallons/yr methylene chloride

Applicable Compliance Method-
Compliance with the annual methylene chloride throughput limitation shall be based upon the record keeping requirements of Section A.III.2. of this permit and shall be the sum of the monthly methylene chloride throughput for the calendar year.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0855130356 Emissions Unit ID: T031 Issuance type: Title V Proposed Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
T031 - 6,000-gallon vertical fixed roof methylene chloride storage tank (TK 6B)	none	none

2. Additional Terms and Conditions

1. None

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II. Operational Restrictions

1. None

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III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (T031) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Methylene Chloride

TLV (mg/m3): 174

Maximum Hourly Emission Rate (lbs/hr): 0.70

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,294

MAGLC (ug/m3): 4,135

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a

modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None