



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
PICKAWAY COUNTY**

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

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

Mailing Address:  
Lazarus Gov. Center  
P.O. Box 1049

**Application No: 01-12127**

**Fac ID: 0165010125**

**DATE: 2/28/2008**

TriMold, LLC  
Steve Furniss  
N A 200 Pittsburgh Rd  
Circleville, OH 43113

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

CDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 2/28/2008  
Effective Date: 2/28/2008**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 01-12127

Application Number: 01-12127  
Facility ID: 0165010125  
Permit Fee: **\$300**  
Name of Facility: TriMold, LLC  
Person to Contact: Steve Furniss  
Address: N A 200 Pittsburgh Rd  
Circleville, OH 43113

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

**200 Pittsburg Rd  
Circleville, Ohio**

Description of proposed emissions unit(s):

**Coating lines.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director

TriMold, LLC

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Modification Issued: 2/28/2008

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## **Part I - GENERAL TERMS AND CONDITIONS**

### **A. Permit to Install General Terms and Conditions**

#### **1. Compliance Requirements**

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

#### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

#### **3. Records Retention Requirements**

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

#### **4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

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

**9. Construction of New Sources(s)**

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

#### **10. Public Disclosure**

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

#### **11. Applicability**

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

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**12. Best Available Technology**

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

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

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

**14. Construction Compliance Certification**

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

**15. Fees**

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

**B. Permit to Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	37.3
HAP	9.9
HAPs	9.9
PE	0.15

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

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

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

**Operations, Property, and/or Equipment - (R003) - One (1) adhesive coating booth with two (2) adjoining spray stations equipped with high volume low pressure (HVLP) spray guns and a single electric infrared heater (Terms in this permit supercede those identified in PTI 01-12031 issued 8/22/2006)**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.</p> <p>The VOC content of any coating employed in R003 shall not exceed 6.01 pounds per gallon, as applied.</p> <p>The VOC content of any thinner or cleanup material employed in R003 shall not exceed 6.72 pounds per gallon.</p> <p>See II.A.2.a below.</p>

OAC rule 3745-31-05(C) (Synthetic Minor to avoid PSD, Title V and MACT permitting)	<p>The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.</p> <p>See II.B.1 below.</p> <p>The total allowable VOC emissions from thinner or cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.</p> <p>See II.B.2 below.</p> <p>Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.</p> <p>Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p> <p>Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p>
OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.
OAC rule 3745-21-07(G)(2)	See II.A.2.b below
ORC 3704.03(F)	See II.C.4 through II.C.7 below

## 2. Additional Terms and Conditions

- 2.a** The hourly VOC emission limitation for this emission unit was established to reflect the maximum potential to emit. It is not necessary to develop additional monitoring, record keeping and / or reporting requirements to ensure compliance with this limit.
- 2.b** To avoid the emission limitations and control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) (i.e. as raw materials or cleanup materials) shall be employed in this emission unit.

## B. Operational Restrictions

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1. The maximum annual coating usage for emissions units R003, R004 and R005 shall not exceed 9,840 gallons, based upon a rolling, 12-month summation of the coating usage figures.

In order to ensure federal enforceability during the first twelve calendar months of operation after issuance of this permit to install, emissions units R003, R004 and R005 shall not exceed the following coating usage limitations:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Coating Usage (Gallons)</u>
1	1,050
1-2	2,100
1-3	3,150
1-4	4,200
1-5	5,250
1-6	6,300
1-7	7,350
1-8	8,400
1-9	9,450
1-10	9,840
1-11	9,840
1-12	9,840

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual coating usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual coating usage for R003, R004 and R005.

2. The maximum annual combined thinner or cleanup material for emissions units R003, R004 and R005 shall not exceed 1,980 gallons, based upon a rolling, 12-month summation of the cleanup material usage figures.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Thinner or Cleanup Material Usage (Gallons)</u>
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1	600
1-2	1,200
1-3	1,800
1-4	1,980
1-5	1,980
1-6	1,980
1-7	1,980
1-8	1,980
1-9	1,980
1-10	1,980
1-11	1,980
1-12	1,980

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual combined thinner or cleanup material usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual combined thinner or cleanup material usage for R003, R004 and R005.

3. The permittee shall operate the spray booth filter whenever this emissions unit is in operation.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the spray booth filter was not in service when the emissions unit was in operation.
2. The permittee shall collect and record the following information for emissions unit R003 on a monthly basis:
  - a. the name and company identification for each coating and thinner or cleanup material employed; and
  - b. the total number of gallons of each coating and thinner or cleanup material employed; and
  - c. the volatile organic compound content of each coating, in pounds per gallon; and
  - d. the volatile organic compound content of each thinner or cleanup material, in pounds per gallon; and
  - e. the individual HAP content of each coating and thinner or cleanup material, as applied, in pounds of individual HAP per gallon; and
  - f. the combined HAP content of each coating and thinner or cleanup material, as applied, in pounds of combined HAP per gallon (sum of the individual HAP contents in II.C.2.e); and
  - g. determination of whether each coating, thinner or cleanup material is photochemically reactive; and
  - h. the number of gallons of each type of cleanup material sent off-site for disposal; and
  - i. the total calculated VOC emissions from all coatings; in tons; and
  - j. the total calculated VOC emissions from thinners and cleanup materials, less the emissions from II.C.2.h above, in tons; and
  - k. the total calculated individual HAP emissions from all coatings, thinners and cleanup materials, in tons; and

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- l. the total calculated combined HAP emissions from all coatings, thinners and cleanup materials, in tons; and
- m. the rolling, 12-month summation of coating usage, in gallons; and

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- n. the rolling, 12-month summation of thinner or cleanup material usage, in gallons; and
  - o. the rolling, 12-month summation of coating VOC emissions, in tons; and
3. The permittee shall collect and record the following information on a monthly basis for the entire facility:
- a. the rolling, 12-month summation of VOC emission from all thinners and cleanup materials from R003, R004 and R005, in tons; and
  - b. the rolling, 12-month summation of facility - wide VOC emissions, in tons; and
  - c. the rolling, 12-month summation of facility - wide individual HAP emissions, in tons; and
  - d. the rolling, 12-month summation of facility - wide combined HAP emissions, in tons.
4. The permit to install for emissions units R003, R004 and R005 were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of

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Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";  
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold

Emissions Unit ID: **R003**

Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
- TLV OVER 10 ~ TIMES { 8 OVER X } ~ TIMES { 5 OVER Y } ~ = 4 ~ { TLV OVER XY } ~ = MAGLC
- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: cyclohexane

TLV (mg/m3): 344.2

Maximum Hourly Emission Rate (lbs/hr): 53.04

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,017.0

MAGLC (ug/m3): 8,195

Toxic Contaminant: ethyl acetate

TLV (mg/m3): 1,441.3

Maximum Hourly Emission Rate (lbs/hr): 13.83

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 265.1

MAGLC (ug/m3): 34,316.9

Toxic Contaminant: methyl alcohol

TLV (mg/m3): 262.1

Maximum Hourly Emission Rate (lbs/hr): 9.28

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 177.89

MAGLC (ug/m3): 6,240.1

Toxic Contaminant: methyl ethyl ketone

TLV (mg/m3): 589.8

Maximum Hourly Emission Rate (lbs/hr): 26.54

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 508.73

MAGLC (ug/m3): 14,042.3

Toxic Contaminant: methylcyclohexane

TLV (mg/m3): 1,606.4

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Maximum Hourly Emission Rate (lbs/hr): 55.30  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,060.02  
MAGLC (ug/m3): 38,247.2

Toxic Contaminant: toluene  
TLV (mg/m3): 188.4  
Maximum Hourly Emission Rate (lbs/hr): 20.46  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 392.20  
MAGLC (ug/m3): 4,485.8

Toxic Contaminant: acetone  
TLV (mg/m3): 1,187.1  
Maximum Hourly Emission Rate (lbs/hr): 53.30  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,060.02  
MAGLC (ug/m3): 28,264.7

The permittee, has demonstrated that emissions of cyclohexane, ethyl acetate, methyl alcohol, methyl ethyl ketone, methylcyclohexane, toluene and acetone, from emissions units R003, R004 and R005, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

5. Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack

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diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous permitted level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

6. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions units to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
7. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F)

Emissions Unit ID: **R003**

through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of coating VOC content limitation; and
  - b. all exceedances of the thinner or cleanup VOC content limitation; and

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- c. all exceedances of the rolling, 12-month total VOC emission limitation for R003; and
- d. all exceedances of the rolling, 12-month coating usage limitation for R003; and
- e. all exceedances of the rolling, 12-month thinner and cleanup material usage limitation for R003, R004 and R005.

These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

- 2. The permittee shall submit annual reports which identify the following:
  - a. all exceedances of the facility - wide rolling, 12-month VOC emission limitation ; and
  - b. all exceedances of the facility - wide rolling, 12-month individual HAP emission limitation ; and
  - c. all exceedances of the facility - wide rolling, 12-month combined HAP emission limitation.

These reports shall be submitted by April 15 of each year and shall cover the previous calendar year.

- 3. The permittee shall notify the Ohio EPA, Central District Office in writing of any record showing that the spray booth filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Central District Office) within 30 days after the event occurs.
- 4. The permittee shall submit annual reports to the Ohio EPA Central District Office documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

**E. Testing Requirements**

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

a. Emission Limitation: Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated using the following equation which accounts for the maximum coating VOC content and the maximum hourly coating usage rate based on information provided in the permittee's Permit to Install application 01-12127:

$$(6.01 \text{ lb VOC / gallon}) \times (6.5 \text{ gallons / hour}) = 39.1 \text{ lb VOC / hour}$$

b. Emission Limitation: The VOC content of any coating employed in R003 shall not exceed 6.01 pounds per gallon, as applied

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.c above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

c. Emission Limitation: The VOC content of any thinner or cleanup material employed in R003 shall not exceed 6.72 pounds per gallon.

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.d above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

d. Emission Limitation: The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the VOC emissions limit may be determined through the monthly record keeping specified in II.C.2.o above.

e. Emission Limitation: The total allowable VOC emissions from cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.

Emissions Unit ID: **R003**

Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.a above.

- f. Emission Limitation: Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.

Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation

Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.b through II.C.3.d above.

- g. Emission Limitation: Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- h. Emission Limitation: Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.

Applicable Compliance Method: This emission limitation was determined using OAC rule 3745-17-11 Table 1. Compliance with the hourly particulate emission mass emission rate limitation may be determined using the following formula:

$$PE = U * SC * (1 - (MCE / 100)) * (1 - (TE / 100))$$

where:

PE = particulate emissions from the stack (pounds / hour)

U = maximum coating usage rate for R003 (gallons per hour)  
= 6.5 gallons per hour

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SC = maximum solids content of the coating (pounds / gallon)  
= 1.56 pounds per gallon

MCE = the manufacturer's guaranteed control efficiency of the filter  
(percent)  
= 99%

TE = Transfer Efficiency of the coating (percent)  
= 65%

The values input into this equation were supplied by the permittee in  
Permit to Install application 01-12127.

**F. Miscellaneous Requirements**

None

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (R004) - Front / Back Cover Line No. 1: Two adhesive spray booths equipped with high-volume low-pressure (HVLP) spray guns and an electric infrared heater**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.</p> <p>The VOC content of any coating employed in R004 shall not exceed 6.01 pounds per gallon, as applied.</p> <p>The VOC content of any thinner or cleanup material employed in R004 shall not exceed 6.72 pounds per gallon.</p> <p>See II.A.2.a below.</p>

OAC rule 3745-31-05(C) (Synthetic Minor to avoid PSD, Title V and MACT permitting)	<p>The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.</p> <p>See II.B.1 below.</p> <p>The total allowable VOC emissions from thinner or cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.</p> <p>See II.B.2 below.</p> <p>Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.</p> <p>Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p> <p>Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p>
OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.
OAC rule 3745-21-07(G)(2)	See II.A.2.b below
ORC 3704.03(F)	See II.C.4 through II.C.7 below

## 2. Additional Terms and Conditions

- 2.a** The hourly VOC emission limitation for this emission unit was established to reflect the maximum potential to emit. It is not necessary to develop additional monitoring, record keeping and / or reporting requirements to ensure compliance with this limit.
- 2.b** To avoid the emission limitations and control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) (i.e. as raw materials or cleanup materials) shall be employed in this emission unit.

## B. Operational Restrictions

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1. The maximum annual coating usage for emissions units R003, R004 and R005 shall not exceed 9,840 gallons, based upon a rolling, 12-month summation of the coating usage figures.

In order to ensure federal enforceability during the first twelve calendar months of operation after issuance of this permit to install, emissions units R003, R004 and R005 shall not exceed the following coating usage limitations:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Coating Usage (Gallons)</u>
1	1,050
1-2	2,100
1-3	3,150
1-4	4,200
1-5	5,250
1-6	6,300
1-7	7,350
1-8	8,400
1-9	9,450
1-10	9,840
1-11	9,840
1-12	9,840

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual coating usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual coating usage for R003, R004 and R005.

2. The maximum annual combined thinner or cleanup material for emissions units R003, R004 and R005 shall not exceed 1,980 gallons, based upon a rolling, 12-month summation of the cleanup material usage figures.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Thinner or Cleanup Material Usage (Gallons)</u>
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1	600
1-2	1,200
1-3	1,800
1-4	1,980
1-5	1,980
1-6	1,980
1-7	1,980
1-8	1,980
1-9	1,980
1-10	1,980
1-11	1,980
1-12	1,980

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual combined thinner or cleanup material usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual combined thinner or cleanup material usage for R003, R004 and R005.

3. The permittee shall operate the spray booth filter whenever this emissions unit is in operation.

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**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the spray booth filter was not in service when the emissions unit was in operation.
2. The permittee shall collect and record the following information for emissions unit R004 on a monthly basis:
  - a. the name and company identification for each coating and thinner or cleanup material employed; and
  - b. the total number of gallons of each coating and thinner or cleanup material employed; and
  - c. the volatile organic compound content of each coating, in pounds per gallon; and
  - d. the volatile organic compound content of each thinner or cleanup material, in pounds per gallon; and
  - e. the individual HAP content of each coating and thinner or cleanup material, as applied, in pounds of individual HAP per gallon; and
  - f. the combined HAP content of each coating and thinner or cleanup material, as applied, in pounds of combined HAP per gallon (sum of the individual HAP contents in II.C.2.e); and
  - g. determination of whether each coating, thinner or cleanup material is photochemically reactive; and
  - h. the number of gallons of each type of cleanup material sent off-site for disposal; and
  - i. the total calculated VOC emissions from all coatings; in tons; and
  - j. the total calculated VOC emissions from thinners and cleanup materials, less the emissions from II.C.2.h above, in tons; and
  - k. the total calculated individual HAP emissions from all coatings, thinners and cleanup materials, in tons; and

- l. the total calculated combined HAP emissions from all coatings, thinners and cleanup materials, in tons; and
- m. the rolling, 12-month summation of coating usage, in gallons; and

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- n. the rolling, 12-month summation of thinner or cleanup material usage, in gallons; and
  - o. the rolling, 12-month summation of coating VOC emissions, in tons; and
3. The permittee shall collect and record the following information on a monthly basis for the entire facility:
- a. the rolling, 12-month summation of VOC emission from all thinners and cleanup materials from R003, R004 and R005, in tons; and
  - b. the rolling, 12-month summation of facility - wide VOC emissions, in tons; and
  - c. the rolling, 12-month summation of facility - wide individual HAP emissions, in tons; and
  - d. the rolling, 12-month summation of facility - wide combined HAP emissions, in tons.
4. The permit to install for emissions units R003, R004 and R005 were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of

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Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";  
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold

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Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
- $$\text{TLV OVER } 10 \sim \text{TIMES } \left\{ \frac{8 \text{ OVER } X \right\} \sim \text{TIMES } \left\{ \frac{5 \text{ OVER } Y \right\} = \text{MAGLC}$$
- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: cyclohexane  
 TLV (mg/m3): 344.2  
 Maximum Hourly Emission Rate (lbs/hr): 53.04  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,017.0  
 MAGLC (ug/m3): 8,195

Toxic Contaminant: ethyl acetate  
 TLV (mg/m3): 1,441.3  
 Maximum Hourly Emission Rate (lbs/hr): 13.83  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 265.1  
 MAGLC (ug/m3): 34,316.9

Toxic Contaminant: methyl alcohol  
 TLV (mg/m3): 262.1  
 Maximum Hourly Emission Rate (lbs/hr): 9.28  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 177.89  
 MAGLC (ug/m3): 6,240.1

Toxic Contaminant: methly ethyl ketone  
 TLV (mg/m3): 589.8  
 Maximum Hourly Emission Rate (lbs/hr): 26.54  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 508.73  
 MAGLC (ug/m3): 14,042.3

Toxic Contaminant: methylcyclohexane

Emissions Unit ID: **R004**TLV (mg/m<sup>3</sup>): 1,606.4

Maximum Hourly Emission Rate (lbs/hr): 55.30

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1,060.02MAGLC (ug/m<sup>3</sup>): 38,247.2

Toxic Contaminant: toluene

TLV (mg/m<sup>3</sup>): 188.4

Maximum Hourly Emission Rate (lbs/hr): 20.46

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 392.20MAGLC (ug/m<sup>3</sup>): 4,485.8

Toxic Contaminant: acetone

TLV (mg/m<sup>3</sup>): 1,187.1

Maximum Hourly Emission Rate (lbs/hr): 53.30

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1,060.02MAGLC (ug/m<sup>3</sup>): 28,264.7

The permittee, has demonstrated that emissions of cyclohexane, ethyl acetate, methyl alcohol, methyl ethyl ketone, methylcyclohexane, toluene and acetone, from emissions units R003, R004 and R005, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

5. Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack

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diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous permitted level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

6. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions units to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
7. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F)

Emissions Unit ID: **R004**

through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of coating VOC content limitation; and
  - b. all exceedances of the thinner or cleanup VOC content limitation; and

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- c. all exceedances of the rolling, 12-month total VOC emission limitation for R004; and
- d. all exceedances of the rolling, 12-month coating usage limitation for R004; and
- e. all exceedances of the rolling, 12-month thinner and cleanup material usage limitation for R003, R004 and R005.

These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

- 2. The permittee shall submit annual reports which identify the following:
  - a. all exceedances of the facility - wide rolling, 12-month VOC emission limitation ; and
  - b. all exceedances of the facility - wide rolling, 12-month individual HAP emission limitation ; and
  - c. all exceedances of the facility - wide rolling, 12-month combined HAP emission limitation.

These reports shall be submitted by April 15 of each year and shall cover the previous calendar year.

- 3. The permittee shall notify the Ohio EPA, Central District Office in writing of any record showing that the spray booth filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Central District Office) within 30 days after the event occurs.
- 4. The permittee shall submit annual reports to the Ohio EPA Central District Office documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

**E. Testing Requirements**

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

- a. Emission Limitation: Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated using the following equation which accounts for the maximum coating VOC content and the maximum hourly coating usage rate based on information provided in the permittee's Permit to Install application 01-12127:

$$(6.01 \text{ lb VOC / gallon}) \times (6.5 \text{ gallons / hour}) = 39.1 \text{ lb VOC / hour}$$

- b. Emission Limitation: The VOC content of any coating employed in R004 shall not exceed 6.01 pounds per gallon, as applied

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.c above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

- c. Emission Limitation: The VOC content of any thinner or cleanup material employed in R004 shall not exceed 6.72 pounds per gallon.

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.d above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

- d. Emission Limitation: The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the VOC emissions limit may be determined through the monthly record keeping specified in II.C.2.o above.

- e. Emission Limitation: The total allowable VOC emissions from cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.

Emissions Unit ID: **R004**

Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.a above.

- f. Emission Limitation: Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.

Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation

Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.b through II.C.3.d above.

- g. Emission Limitation: Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- h. Emission Limitation: Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.

Applicable Compliance Method: This emission limitation was determined using OAC rule 3745-17-11 Table 1. Compliance with the hourly particulate emission mass emission rate limitation may be determined using the following formula:

$$PE = U * SC * (1 - (MCE / 100)) * (1 - (TE / 100))$$

where:

PE = particulate emissions from the stack (pounds / hour)

U = maximum coating usage rate for R003 (gallons per hour)  
= 6.5 gallons per hour

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SC = maximum solids content of the coating (pounds / gallon)  
= 1.56 pounds per gallon

MCE = the manufacturer's guaranteed control efficiency of the filter  
(percent)  
= 99%

TE = Transfer Efficiency of the coating (percent)  
= 65%

The values input into this equation were supplied by the permittee in Permit to Install application 01-12127.

**F. Miscellaneous Requirements**

None

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (R005) - Front / Back Cover Line No. 2: Two adhesive spray booths equipped with high-volume low-pressure (HVLP) spray guns and an electric infrared heater**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.</p> <p>The VOC content of any coating employed in R005 shall not exceed 6.01 pounds per gallon, as applied.</p> <p>The VOC content of any thinner or cleanup material employed in R005 shall not exceed 6.72 pounds per gallon.</p> <p>See II.A.2.a below.</p>

OAC rule 3745-31-05(C) (Synthetic Minor to avoid PSD, Title V and MACT permitting)	<p>The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.</p> <p>See II.B.1 below.</p> <p>The total allowable VOC emissions from thinner or cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.</p> <p>See II.B.2 below.</p> <p>Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.</p> <p>Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p> <p>Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.</p>
OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.
OAC rule 3745-21-07(G)(2)	See II.A.2.b below
ORC 3704.03(F)	See II.C.4 through II.C.7 below

## 2. Additional Terms and Conditions

- 2.a** The hourly VOC emission limitation for this emission unit was established to reflect the maximum potential to emit. It is not necessary to develop additional monitoring, record keeping and / or reporting requirements to ensure compliance with this limit.
- 2.b** To avoid the emission limitations and control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) (i.e. as raw materials or cleanup materials) shall be employed in this emission unit.

## B. Operational Restrictions

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1. The maximum annual coating usage for emissions units R003, R004 and R005 shall not exceed 9,840 gallons, based upon a rolling, 12-month summation of the coating usage figures.

In order to ensure federal enforceability during the first twelve calendar months of operation after issuance of this permit to install, emissions units R003, R004 and R005 shall not exceed the following coating usage limitations:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Coating Usage (Gallons)</u>
1	1,050
1-2	2,100
1-3	3,150
1-4	4,200
1-5	5,250
1-6	6,300
1-7	7,350
1-8	8,400
1-9	9,450
1-10	9,840
1-11	9,840
1-12	9,840

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual coating usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual coating usage for R003, R004 and R005.

2. The maximum annual combined thinner or cleanup material for emissions units R003, R004 and R005 shall not exceed 1,980 gallons, based upon a rolling, 12-month summation of the cleanup material usage figures.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Thinner or Cleanup Material Usage (Gallons)</u>
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1	600
1-2	1,200
1-3	1,800
1-4	1,980
1-5	1,980
1-6	1,980
1-7	1,980
1-8	1,980
1-9	1,980
1-10	1,980
1-11	1,980
1-12	1,980

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual combined thinner or cleanup material usage for R003, R004 and R005 shall be based upon a rolling, 12-month summation of the annual combined thinner or cleanup material usage for R003, R004 and R005.

3. The permittee shall operate the spray booth filter whenever this emissions unit is in operation.

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**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document any time periods when the spray booth filter was not in service when the emissions unit was in operation.
2. The permittee shall collect and record the following information for emissions unit R005 on a monthly basis:
  - a. the name and company identification for each coating and thinner or cleanup material employed; and
  - b. the total number of gallons of each coating and thinner or cleanup material employed; and
  - c. the volatile organic compound content of each coating, in pounds per gallon; and
  - d. the volatile organic compound content of each thinner or cleanup material, in pounds per gallon; and
  - e. the individual HAP content of each coating and thinner or cleanup material, as applied, in pounds of individual HAP per gallon; and
  - f. the combined HAP content of each coating and thinner or cleanup material, as applied, in pounds of combined HAP per gallon (sum of the individual HAP contents in II.C.2.e); and
  - g. determination of whether each coating, thinner or cleanup material is photochemically reactive; and
  - h. the number of gallons of each type of cleanup material sent off-site for disposal; and
  - i. the total calculated VOC emissions from all coatings; in tons; and
  - j. the total calculated VOC emissions from thinners and cleanup materials, less the emissions from II.C.2.h above, in tons; and
  - k. the total calculated individual HAP emissions from all coatings, thinners and cleanup materials, in tons; and

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- l. the total calculated combined HAP emissions from all coatings, thinners and cleanup materials, in tons; and
- m. the rolling, 12-month summation of coating usage, in gallons; and

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- n. the rolling, 12-month summation of thinner or cleanup material usage, in gallons; and
  - o. the rolling, 12-month summation of coating VOC emissions, in tons; and
3. The permittee shall collect and record the following information on a monthly basis for the entire facility:
- a. the rolling, 12-month summation of VOC emission from all thinners and cleanup materials from R003, R004 and R005, in tons; and
  - b. the rolling, 12-month summation of facility - wide VOC emissions, in tons; and
  - c. the rolling, 12-month summation of facility - wide individual HAP emissions, in tons; and
  - d. the rolling, 12-month summation of facility - wide combined HAP emissions, in tons.
4. The permit to install for emissions units R003, R004 and R005 were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of

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Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";  
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold

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Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
- $$\text{TLV OVER } 10 \sim \text{TIMES } \left\{ \frac{8 \text{ OVER } X \right\} \sim \text{TIMES } \left\{ \frac{5 \text{ OVER } Y \right\} = \text{MAGLC}$$
- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: cyclohexane

TLV (mg/m<sup>3</sup>): 344.2

Maximum Hourly Emission Rate (lbs/hr): 53.04

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1,017.0

MAGLC (ug/m<sup>3</sup>): 8,195

Toxic Contaminant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1,441.3

Maximum Hourly Emission Rate (lbs/hr): 13.83

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 265.1

MAGLC (ug/m<sup>3</sup>): 34,316.9

Toxic Contaminant: methyl alcohol

TLV (mg/m<sup>3</sup>): 262.1

Maximum Hourly Emission Rate (lbs/hr): 9.28

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 177.89

MAGLC (ug/m<sup>3</sup>): 6,240.1

Toxic Contaminant: methly ethyl ketone

TLV (mg/m<sup>3</sup>): 589.8

Maximum Hourly Emission Rate (lbs/hr): 26.54

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 508.73

MAGLC (ug/m<sup>3</sup>): 14,042.3

Toxic Contaminant: methylcyclohexane

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TLV (mg/m<sup>3</sup>): 1,606.4  
Maximum Hourly Emission Rate (lbs/hr): 55.30  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1,060.02  
MAGLC (ug/m<sup>3</sup>): 38,247.2

Toxic Contaminant: toluene  
TLV (mg/m<sup>3</sup>): 188.4  
Maximum Hourly Emission Rate (lbs/hr): 20.46  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 392.20  
MAGLC (ug/m<sup>3</sup>): 4,485.8

Toxic Contaminant: acetone  
TLV (mg/m<sup>3</sup>): 1,187.1  
Maximum Hourly Emission Rate (lbs/hr): 53.30  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1,060.02  
MAGLC (ug/m<sup>3</sup>): 28,264.7

The permittee, has demonstrated that emissions of cyclohexane, ethyl acetate, methyl alcohol, methyl ethyl ketone, methylcyclohexane, toluene and acetone, from emissions units R003, R004 and R005, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

5. Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack

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diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous permitted level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

6. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions units to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
7. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F)

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through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of coating VOC content limitation; and
  - b. all exceedances of the thinner or cleanup VOC content limitation; and

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- c. all exceedances of the rolling, 12-month total VOC emission limitation for R005; and
- d. all exceedances of the rolling, 12-month coating usage limitation for R005; and
- e. all exceedances of the rolling, 12-month thinner and cleanup material usage limitation for R003, R004 and R005.

These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.

- 2. The permittee shall submit annual reports which identify the following:
  - a. all exceedances of the facility - wide rolling, 12-month VOC emission limitation ; and
  - b. all exceedances of the facility - wide rolling, 12-month individual HAP emission limitation ; and
  - c. all exceedances of the facility - wide rolling, 12-month combined HAP emission limitation.

These reports shall be submitted by April 15 of each year and shall cover the previous calendar year.

- 3. The permittee shall notify the Ohio EPA, Central District Office in writing of any record showing that the spray booth filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Central District Office) within 30 days after the event occurs.
- 4. The permittee shall submit annual reports to the Ohio EPA Central District Office documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

**E. Testing Requirements**

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

- a. Emission Limitation: Volatile organic compound (VOC) emission shall not exceed 39.1 pounds per hour, excluding cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated using the following equation which accounts for the maximum coating VOC content and the maximum hourly coating usage rate based on information provided in the permittee's Permit to Install application 01-12127:

$$(6.01 \text{ lb VOC / gallon}) \times (6.5 \text{ gallons / hour}) = 39.1 \text{ lb VOC / hour}$$

- b. Emission Limitation: The VOC content of any coating employed in R005 shall not exceed 6.01 pounds per gallon, as applied

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.c above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

- c. Emission Limitation: The VOC content of any thinner or cleanup material employed in R005 shall not exceed 6.72 pounds per gallon.

Applicable Compliance Method: Compliance with the VOC limit may be determined through the monthly record keeping specified in II.C.2.d above. Formulation data or USEPA Method 24 (40 CFR Part 60, Appendix A) shall be used to determine the organic compound content of the coatings.

- d. Emission Limitation: The total allowable VOC emissions from coating material usage in emission units R003, R004 and R005 shall not exceed 29.7 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the VOC emissions limit may be determined through the monthly record keeping specified in II.C.2.o above.

- e. Emission Limitation: The total allowable VOC emissions from cleanup material usage in emissions units R003, R004 and R005 shall not exceed 6.9 tons per rolling, 12-month summation.

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Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.a above.

- f. Emission Limitation: Facility - wide VOC emissions shall not exceed 37.3 tons per rolling, 12-month summation.

Facility - wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation

Facility - wide combined HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation.

Applicable Compliance Method: Compliance with the facility - wide emissions limitations may be determined through the monthly record keeping specified in II.C.3.b through II.C.3.d above.

- g. Emission Limitation: Visible particulate emissions (VE) from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- h. Emission Limitation: Particulate emissions (PE) from the stack shall not exceed 0.551 pounds per hour.

Applicable Compliance Method: This emission limitation was determined using OAC rule 3745-17-11 Table 1. Compliance with the hourly particulate emission mass emission rate limitation may be determined using the following formula:

$$PE = U * SC * (1 - (MCE / 100)) * (1 - (TE / 100))$$

where:

PE = particulate emissions from the stack (pounds / hour)

U = maximum coating usage rate for R003 (gallons per hour)  
= 6.5 gallons per hour

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SC = maximum solids content of the coating (pounds / gallon)  
= 1.56 pounds per gallon

MCE = the manufacturer's guaranteed control efficiency of the filter  
(percent)  
= 99%

TE = Transfer Efficiency of the coating (percent)  
= 65%

The values input into this equation were supplied by the permittee in Permit to Install application 01-12127.

**F. Miscellaneous Requirements**

None