



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: FINAL PERMIT TO INSTALL
WYANDOT COUNTY
Application No: 03-3240**

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
X	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: September 22, 1999

M-TEK, Inc
Dan McDonald
1020 Volunteer Parkway
Manchester, TN 37355-6461

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

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

cc: US EPA
DAPC, NWDO



FINAL PERMIT TO INSTALL 03-3240

Application Number: 03-3240

APS Premise Number: 0388010052

Permit Fee: **\$4400**

Name of Facility: M-TEK, Inc

Person to Contact: Dan McDonald

Address: 1020 Volunteer Parkway
Manchester, TN 37355-6461

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1111 North Warpole Street
Upper Sandusky, Ohio**

Description of proposed emissions unit(s):
22 ADHESIVE SPRAY BOOTHS W/CARBON BED CONCENTRATOR & THERMAL OXIDIZER.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

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

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

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

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

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 application must be made to the Director for the installation or modification of any other emissions unit(s).

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 thirty (30) 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>
OC	30.6

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB01 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.60 lb OC/hr & 2.64 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.60 lb OC/hr & 2.64 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSBO2 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.60 lb OC/hr & 2.64 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

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Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

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- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.60 lb OC/hr & 2.64 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB03 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	12.9 lbs OC/hr & 56.6 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the Carbon in the organic material being incinerated shall be oxidized to carbon dioxide

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 12.9 lbs OC/hr & 56.6 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB04 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	12.9 lbs OC/hr & 56.6 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the Carbon in the organic material being incinerated shall be oxidized to carbon dioxide

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 12.9 lbs OC/hr & 56.6 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB05 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.83 lb OC/hr & 3.51 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduce by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA’s “Air Toxic Policy” and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect a record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.83 lb OC/hr & 3.51 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB06 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.83 lb OC/hr & 3.51 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.83 lb OC/hr & 3.51 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MDSB07 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.44 lb OC/hr & 1.94 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.44 lb OC/hr & 1.94 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB01 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect a record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the hourly/annual emission limitations in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB02 w/ Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	<p>2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)</p> <p>Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.</p> <p>Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.</p>

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB03 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB04 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB05 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered

a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect a record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB06 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic

Policy” and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements

- a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.
- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB07 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB08 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA’s “Air Toxic Policy” and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 2.02 lbs OC/hr & 8.83 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB09 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration ($\mu\text{g}/\text{m}^3$): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) ($\mu\text{g}/\text{m}^3$): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.

3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect a record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.
 - d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.

- f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.
 - c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)

M-TEK, Inc

PTI Application: **03-3240**

September 22, 1999

Facility ID: **0388010052**

Emissions Unit ID: **R016**

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB010 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB011 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB012 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a “modification” as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and,
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth BMSB013 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

- 1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

- 1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 1.26 lbs OC/hr & 5.52 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MTBS01 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.63 lb OC/hr & 2.76 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

- 1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

- 1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal incinerator.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.63 lb OC/hr & 2.76 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Adhesive Spray Booth MTSBO2 w/Carbon Bed Concentrator & Thermal Oxidizer	OAC rule 3745-31-05	0.63 lb OC/hr & 2.76 tons OC/yr (includes cleanup)
	OAC rule 3745-21-07 (G) (2)	Emissions of organic compounds shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.
	OAC rule 3745-21-07 (G) (6)	Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

2. **Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07 (G) (2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The carbon bed concentrator in conjunction with the thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

B. Operational Restrictions

1. This permit allows for the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for the proposed installation of emissions units R001-R022. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emission units exhaust systems, 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 each pollutant:

Emission Units: R001-R022

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 5.81

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 47

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 4476

Emission Units: R001-R022

Pollutant: n-Hexane

TLV (ug/m³): 176,000

Maximum Hourly Emission Rate (lbs/hr): 4.66

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 37.7

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4190

Emission Units: R001-R022

Pollutant: c-Hexane

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.11

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 25.16

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: Methanol

TLV (ug/m³): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.06

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 8.58

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³) : 6238

Emission Units: R001-R022

Pollutant: Ethyl Acetate

TLV (ug/m³): 1,440,000

Maximum Hourly Emission Rate (lbs/hr): 10.05

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 81.30

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 34,286

Emission Units: R001-R022

Pollutant: Hexane (mixed isomers)

TLV (ug/m³): 1,760,000

Maximum Hourly Emission Rate (lbs/hr): 3.26

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 1.94

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 41,905

Emission Units: R001-R022

Pollutant: MEK

TLV (ug/m³): 590

Maximum Hourly Emission Rate (lbs/hr): 0.35

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 2.83

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 14,048

Emission Units: R001-R022

Pollutant: Acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.24

Predicted 1-hour maximum Ground-Level Concentration (ug/m³): 26.37

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 42,381

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a “modification”:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or 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 specified in the above table;
- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an “allowable” emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials that would result in the emission of an air contaminant not previously permitted; and
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a “modification” requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a “modification” under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall operate a carbon bed concentrator and thermal oxidizer at all times when the emissions unit is in operation.
3. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect an record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.
 - b. A log for the capture (collection) system, control device and monitoring equipment which includes the following:
 - i. Downtime when the associated emissions unit was in operation.
 - ii. Operating time.
3. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each coating and photochemically reactive cleanup material employed.
 - b. The number of gallons of each coating and photochemically reactive cleanup material employed.
 - c. The organic compound content of each coating and photochemically reactive cleanup material, in pounds per gallon.

- d. The total controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total number of hours the emissions unit was in operation.
 - f. The average hourly controlled organic compound emission rate for all coatings and photochemically reactive cleanup materials, i.e., d/e, in pounds per hour (average).
 - g. The annual year to date OC emissions from all coatings and photochemically reactive cleanup materials (sum of d for each day to date from January to December).
4. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
- a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change ins stack/exhaust parameters, etc.); and
 - b. A copy of resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, when the associated emissions unit was in operation.
 - c. Any deviations (excursions) from the annual emission limitation in section A.1.

E. Testing Requirements

1. Test Requirements
 - a. Emissions testing shall be conducted within 3 months after startup of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for organic compounds and the ninety percent destruction efficiency requirement for the thermal oxidizer.

- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal oxidizer: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."
- e. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements:

- a. Emission Limitation: Use of control system with 85% overall control efficiency rate for OC.

Applicable Compliance Method: Compliance with this limitation will be based on the required testing in section A.V.1.

- b. Emission Limitation : 0.63 lb OC/hr & 2.76 tons OC/yr (includes cleanup)

Applicable Compliance Method: Compliance shall be based on recordkeeping requirements contained in section C.3 of this permit.

F. Miscellaneous Requirements

NONE.