



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
WAYNE COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 02-2791

DATE: July 8, 1999

Metromedia Technologies, Inc.
Raymond A Batke
1061 Venture Boulevard
Wooster, OH 44691

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,
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA
DAPC, NEDO



**Permit To Install
Terms and
Conditions**

**Issue Date: July 8, 1999
Effective Date: July 8, 1999**

PERMIT TO INSTALL 02-2791

Application Number: 02-2791
APS Premise Number: 0285030295
Permit Fee: **\$7600**
Name of Facility: Metromedia Technologies, Inc.
Person to Contact: Raymond A Batke
Address: 1061 Venture Boulevard
Wooster, OH 44691

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1061 Venture Boulevard
Wooster City, Ohio**

Description of proposed emissions unit(s):
24 JET PRINT NG MACHINES AND MIX ROOM.

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule

3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.14 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, recordkeeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

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

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7. Fees

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

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
 - i. Compliance certifications shall be submitted on an annual basis unless the applicable requirement specifies more frequent submissions.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

10. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or

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upset provision contained in any applicable requirement.

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11. Title V Permit To Operate Application

Pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit.

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

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lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance

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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. 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.

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	126.0

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None.

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

None.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R001 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental

Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
 - b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air low leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
 - c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and

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

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R001 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. Additional Terms and Conditions

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

NONE.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;
- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

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Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

**Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³):
11.17**

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

Metromedia Technologies
PTI Application: 02-2791
July 8, 1999

Emissions Unit ID: R002
Facility ID: 0285030295

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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R002 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental

Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
 - b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air low leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
 - c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information

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

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R002 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

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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,

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- 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R003 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices

Emissions Unit ID: R003

shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

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V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air low leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a

Emissions Unit ID: **R003**

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

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R003 - Ink jet printer 53.1 feet long by 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. Additional Terms and Conditions

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:

- a. The name and identification of each liquid organic compound contained in coatings, inks,

and cleanup materials employed;

- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³):
11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

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- 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R004 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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

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OAC rule 3745-15-06. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;

c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions test(s) shall be signed by

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the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R004 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. Additional Terms and Conditions

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:

- a. The name and identification of each liquid organic compound contained in coatings, inks,

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and cleanup materials employed;

- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R005 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information

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

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R005 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:

- a. The name and identification of each liquid organic compound contained in coatings, inks,

and cleanup materials employed;

- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R006 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - c. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - d. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - e. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;

c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection

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Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

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g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R006 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:

- a. The name and identification of each liquid organic compound contained in coatings, inks,

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and cleanup materials employed;

- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;
- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R007 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

- 1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;

c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions test(s) shall be signed by

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the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R007 - Ink jet printer 61.4 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R008 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the

Emissions Unit ID: **R008**

thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

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accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R008 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. Additional Terms and Conditions

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

Emissions Unit ID: R008

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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
 - a. 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

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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.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R009 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R009 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. Additional Terms and Conditions

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R010 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

Emissions Unit ID: **R010**

incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

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accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

Emissions Unit ID: **R010**

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

1. This Permit to Install (PTI) supersedes PTI Number 02-4035, effective September 20, 1989, for this emissions unit.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R010 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R011 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

Emissions Unit ID: **R011**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R011 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly Recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;
 - c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;

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- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by Recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

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1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant:	MIBK
TLV (ug/m³):	205,000
Maximum Hourly Emission Rate (lbs/hr):	28.8 (ALL 24 MACHINES)
Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³):	11.17
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³):	4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

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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.

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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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R012 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring

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and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R012 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R013 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R013 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit’s potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

3. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R014 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

Emissions Unit ID: R014

incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

Emissions Unit ID: **R014**

person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R014 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R015 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

Emissions Unit ID: **R015**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R015 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit’s potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
- b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R016 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the

Emissions Unit ID: **R016**

thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 2. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

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accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R016 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
R017 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	<p>OAC 3745-21-07</p> <p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p> <p>Less stringent than or equivalent to OAC 3745-31-05</p>

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which

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measures and records the combustion temperature within the thermal incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - d. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - e. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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

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3745-15-06. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
 - b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air low leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
 - c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

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Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.
- g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R017 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit’s potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R018 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the

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thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

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1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.
 - a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R018 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

Emissions Unit ID: **R018**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

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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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R019 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's

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recommendations, with any modifications deemed necessary by the permittee.

2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R019 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit’s potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R020 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

Emissions Unit ID: **R020**

incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.
- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information

Emissions Unit ID: **R020**

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

f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R020 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R021 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R021 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit’s potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

3. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

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VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant:	MIBK
TLV (ug/m³):	205,000
Maximum Hourly Emission Rate (lbs/hr):	28.8 (ALL 24 MACHINES)
Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³):	11.17
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³):	4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R022 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

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accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R022 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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;

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- 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.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R023 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. **Additional Terms and Conditions**

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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.

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2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

accordance with the following requirements.

- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R023 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;
 - b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;

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- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

July 8, 1999**VI. Miscellaneous Requirements**

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK**TLV (ug/m³): 205,000****Maximum Hourly Emission Rate (lbs/hr):****28.8 (ALL 24 MACHINES)****Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17****Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880**

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R024 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC 3745-21-07	Less stringent than or equivalent to OAC 3745-31-05

2. Additional Terms and Conditions

- 2.a The organic compounds emitted from this emissions unit, (R001) shall be vented to a control device (a flow concentrator and a thermal oxidizer) with a minimum capture efficiency of 90 percent by weight and a minimum destruction efficiency of 95 percent by weight. This is based on the August 26, 1998, Consent Judgement with Ohio EPA.

II. Operational Restrictions

1. 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 emission test that demonstrated the emissions unit was in compliance.

III. 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 incinerator when the thermal

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incinerator is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. 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 and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the thermal incinerator was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emission units was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall record and maintain the time period of the adsorption/desorption (regeneration) cycle of the control device on a daily basis to demonstrate the time period for the regeneration cycle is within 5 percent of the average cycle demonstrated during the most recent emission test that demonstrated the emissions unit was in compliance.
4. The permittee shall record and maintain the temperature of the air flow leaving the oxidizer to begin the desorption cycle on a daily basis to demonstrate it is not less than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify the following information:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in Additional Special Terms and Condition II.1.
 - b. All days in which the regeneration cycle does not comply with the requirements specified in Additional Special Term and Condition III.3. and 4.
 - c. These 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. The permittee shall submit the reports to the Director (the Ohio Environmental Protection Agency, Northeast District Office).

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

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- a. The emission testing shall be conducted within 90 days of the installation and start up of the control device.

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- b. The emission testing shall be conducted to demonstrate compliance with the capture and destruction efficiency requirements specified in Section A.I.2.a., to establish the average combustion temperature within the thermal oxidizer, to establish the temperature of the air flow leaving the oxidizer to begin the desorption cycle, and to establish the time period for the regeneration cycle;
- c. 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 or an approved alternative test protocol. 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. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio Environmental Protection Agency, Northeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio Environmental Protection Agency, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 Environmental Protection Agency Northeast District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio Environmental Protection Agency Northeast District Office 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 emission unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- f. A comprehensive written report on the results of the emissions test(s) shall be signed by the

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person or persons responsible for the test and submitted to the Ohio Environmental Protection Agency Northeast District Office 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 Ohio Environmental Protection Agency Northeast District Office.

g. The VOC content of each coating, ink, and cleanup material used shall be based upon the use of USEPA Method 24.

VI. Miscellaneous Requirement

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R024 - Ink jet printer 51.0 feet long by 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05 Compliance with the Air Toxics Policy	1.2 pounds OC per hour and 5.2 tons per year See Below The total combined emissions from emissions units R001-R024 shall not exceed 126 tons OC per year.

2. **Additional Terms and Conditions**

- 2.a The emissions from this emissions unit shall not exceed 1.2 pounds OC per hour. This limitation is based on the emission unit's potential to emit after 85.5% overall control efficiency. Therefore, no hourly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds employed in the emissions units R001-R024:
 - a. The name and identification of each liquid organic compound contained in coatings, inks, and cleanup materials employed;

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- b. The amount of each liquid organic compound employed in coatings, inks, and cleanup materials, in gallons;
- c. The OC content of each liquid organic compound employed in coatings, inks, and cleanup materials, in lbs OC/gallon;
- d. The total combined monthly OC emissions (the summation of line (b) multiplied by line (c) for each organic compound employed in coatings, inks, and cleanup materials multiplied by 1 minus the retention factor determined in the BAT study multiplied by 1 minus the overall control efficiency established during the most recent emission test that demonstrated the emissions unit was in compliance).

This information does not have to be kept on a line-by-line basis.

- 2. The permittee shall collect and record the following information for each change where the 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 in stack/exhaust parameters, etc.); and
 - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

- 1. The permittee shall submit annual reports which specify the total combined OC emissions for this emissions units R001-R024 for the previous calendar year. These reports shall be submitted to the Director (the Ohio Environmental Protection Agency, Northeast District Office) by January 30 of each year and cover the previous calendar year.

V. Testing Requirements

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

Emission Limitation

126 tons OC per year facility-wide

Applicable Compliance Method

Compliance shall be determined by recordkeeping specified in B.III.1.

VI. Miscellaneous Requirements

1. This permit allows the use of coatings, inks, and cleanup materials specified by the permittee in the permit to install application for this emissions unit. 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 was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: MIBK

TLV (ug/m³): 205,000

Maximum Hourly Emission Rate (lbs/hr): 28.8 (ALL 24 MACHINES)

Predicted 1-Hour Maximum Ground-Level concentration at the Fenceline (ug/m³): 11.17

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 4880

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 the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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

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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.

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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.