State of Ohio Environmental Protection Agency

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

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: 02-21700
Fac ID: 0285030295

DATE: 3/28/2006

Metromedia Technologies Inc
Carl Udell
1061 Venture Blvd
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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **NEDO**

OhioEPA

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 3/28/2006**
Terms and Conditions	**Effective Date: 3/28/2006**

FINAL PERMIT TO INSTALL 02-21700

Application Number:	02-21700
Facility ID:	0285030295
Permit Fee:	**$2800**
Name of Facility:	Metromedia Technologies Inc
Person to Contact:	Carl Udell
Address:	1061 Venture Blvd Wooster, OH 44691

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

Description of proposed emissions unit(s):
New twist machine and modifications to three other emissions units.

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 Record keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions existing at the time of sampling or measurement.

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

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. If this permit is for an emissions unit located at a Title V facility, then 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.

d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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 re-issuance, or modification

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, 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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 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 and the State and by citizens (to the extent allowed by section 304 of the Act) 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 ORC section 3704.08.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available

Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report,

which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

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

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit 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.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. 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.

7. 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).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

9. 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., postmarked), 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

Pollutant	Tons Per Year
VOC	38.59

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R001 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Emissions Unit ID: **R001**

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line

basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R001**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R001 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R002**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R002 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this

emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the

temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R002**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R002**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R002 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R003 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

Emissions Unit ID: **R003**

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R003 - ink jet printer 53.1 feet long and 17.3 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R004 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R004**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R004 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R005 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
This emissions unit is being modified by installing an additional print head, identical to the first.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.		See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a

minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the

temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined

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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in

pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE) x 2 (print heads*)*

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping

specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R005 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R006 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Emissions Unit ID: **R006**

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

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6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R006**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R006 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R007**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R007 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this

emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the

temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R007**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R007**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R007 - ink jet printer 61.4 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R008 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

Emissions Unit ID: **R008**

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R008 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R009 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R009**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R009 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R010**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R010 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Emissions Unit ID: **R010**

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the

preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons

per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R010 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R011**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R011 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R011**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R011**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R011 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R012**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R012 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this

emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the

temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R012**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R012**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R012 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R013 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

Emissions Unit ID: **R013**

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R013 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R014**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R014 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R014**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R014 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R015**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R015 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the

preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons

per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R015 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R016 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R016**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R016**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R016 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R017**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R017 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this

emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the

temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

Emissions Unit ID: **R017**

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R017**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R017 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R018**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R018 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R018 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R019 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
This emissions unit is being modified by installing an additional print head, identical to the first.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.		See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a

minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour

block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the

temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in

pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio

EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE) x 2 (print heads*)*

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:

Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R019 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R020**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R020 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the

preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons

per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R020 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R021 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption

air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees

Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R021**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.35 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R021 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: **R022**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R022 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
This emissions unit is being modified by installing an additional print head, identical to the first.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation
The terms and conditions specified in this PTI supercede those of PTI 02-12791 issued on July 8, 1999 and modified on September 16, 2003.		See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.70 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE) x 2 (print heads*)*

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (526 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0026 gal/sq. ft.);
OC = maximum ink/coating OC content (6.5 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R022 - ink jet printer 51.0 feet long and 22.1 feet wide and corresponding mixing operations controlled by 38,000 scfm Regensorb system	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R025 - twist printing machine no. 1 inkjet printing on vinyl or other substrates, controlled by Regensorb concentrator and thermal oxidizer	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-16718 issued on August 27, 2002 and modified on April 12, 2005.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.03 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.03 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (250 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0003 gal/sq. ft.);
OC = maximum ink/coating OC content (7.6 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R025 - twist printing machine no. 1 inkjet printing on vinyl or other substrates, controlled by Regensorb concentrator and thermal oxidizer	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R026 - twist printing machine no. 2 inkjet printing on vinyl or other substrates, controlled by Regensorb concentrator and thermal oxidizer	OAC rule 3745-31-05(A)(3)	See A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements of this rule are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
The terms and conditions specified in this PTI supercede those of PTI 02-16718 issued on August 27, 2002 and modified on April 12, 2005.	OAC rule 3745-31-05(C)	9.9 tons per year of any single hazardous air pollutant (HAP), as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation See A.II.1. below.

2. Additional Terms and Conditions

2.a All organic compounds/volatile organic compounds (OC/VOC) emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

2.b OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.03 pound per hour.

2.c OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

2.d The hourly and annual OC/VOC emission limitations are based on this emissions unit's and the facility's potential to emit. Therefore, no record keeping or reporting are required to maintain compliance with these limits.

2.e The building enclosure housing this emissions unit meets the criteria of a permanent total enclosure (defined in U.S. EPA's Reference Method 204), as previously demonstrated in the compliance tests performed on June 30, 1999 and March 24, 2005.

II. Operational Restrictions

1. The actual facility-wide input of hazardous air pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act shall not exceed 500,000 pounds per year of any single HAP and 1,250,000 pounds per year of combined HAPs. Compliance with these throughput restrictions shall be based on a rolling, 12-month summation.

The above throughput restrictions correspond to the emissions limitations specified in A.I.1. through the following equations:

For any single HAP:
(500,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 9.9 TPY

For total combined HAPs:
(1,250,000 lbs/yr HAP input) x (1 - SR) x (1 - DE) x (1 ton / 2,000 lbs) = 24.9 TPY

where:

SR = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency (0.95).

2. The average combustion temperature within the thermal oxidizer, for any three-hour block of time when the emissions unit is in operation, shall be no more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The set point for the desorption air stream temperature shall be maintained at or above

the temperature established during the most recent emission test that demonstrated the emissions unit was in compliance. The temperature of the desorption air stream during the regeneration cycle shall not be more than 50 degrees Fahrenheit below this set point. An audible alarm shall be activated whenever the temperature of the desorption air stream is more than 50 degrees Fahrenheit below the set point.

4. The set point for the regeneration cycle time shall be maintained at the value established during the most recent emissions test that demonstrated compliance. The permittee shall maintain the duration of each regeneration cycle within five (5) percent of the set point. An audible alarm shall be activated whenever the duration of each regeneration cycle is not within five (5) percent of the set point.

5. Operation of the control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by Ohio EPA, compliance with the mass emission limitation shall be determined by performing concurrent mass emission tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a possible violation of the mass emission limitation.

6. Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be reported to the Northeast District Office of Ohio EPA in accordance with OAC rule 3745-15-06(B). Parameter deviations due to such malfunctions, that comply with the requirements of OAC rule 3745-15-06(B), do not constitute violations of the operational restrictions for this emissions unit.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain continuous temperature and time monitors that measure the following when the emissions unit is in operation:

a. the temperature of the exhaust gases in the combustion zone of the thermal oxidizer;

b. the temperature of the desorption air stream entering the concentrator; and

c. the duration of each regeneration cycle for the concentrator.

The permittee shall operate a continuous temperature recorder for the temperature of the exhaust gases in the combustion zone of the thermal oxidizer, and record the temperature when the emissions unit is in operation.

Units shall be in degrees Fahrenheit and minutes. The accuracy for each thermocouple, monitor, clock, and recorder shall be guaranteed by the manufacturer to be within one (1) percent of the temperature/time being measured or five (5) degrees Fahrenheit/0.5 minute, whichever is greater. The temperature monitors and recorders

shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate and maintain audible alarms for deviations in the temperature of the desorption air stream entering the concentrator and the duration of each regeneration cycle for the concentrator. The set points and alarm activation levels shall be set at the values specified in A.II.3 and A.II.4 above.

The permittee shall maintain a log of each instance when an audible alarm is activated, the cause of the alarm, the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operational parameters.

3. The permittee shall maintain a log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

4. On each day of operation of the control system for this emissions unit, the permittee shall record the set points and alarm activation levels, and the corresponding values of temperature and time duration. At least once per calendar month, the permittee shall calibrate the set points and alarm activation levels and maintain records of the results of each calibration.

5. The permittee shall collect and record the following information each month for all organic compounds employed in emissions units R001 through R022, R025, and R026:

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 of OC/gallon; and

d. the total combined monthly OC emissions [summation of (b x c) for each liquid organic compound employed in coatings, inks, and cleanup materials multiplied by one (1) minus the retention factor determined in the 12/30/97 BAT study (0.209), multiplied by one (1) minus the overall control efficiency determined 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.

6. The permittee shall collect and record the following information each month for emissions units R001 through R022, R025, and R026:

a. the name and identification number of each ink/coating employed;

b. the individual HAP* content for each HAP of each ink/coating in pounds of individual HAP per gallon of ink/coating, as applied;

c. the total combined HAP content of each ink/coating in pounds of combined HAPs per gallon of ink/coating, as applied [sum all the individual HAP contents from (b)];

d. the number of gallons of each ink/coating employed;

e. the name and identification number of each cleanup material/thinner employed;

f. the individual HAP content for each HAP of each cleanup material/thinner, in pounds of individual HAP per gallon of cleanup material, as applied;

g. the total combined HAP content of each cleanup material/thinner, in pounds of combined HAPs per gallon of cleanup material/thinner, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each cleanup material/thinner employed;

i. the total individual HAP input for each HAP from all inks/coatings and cleanup materials/thinner employed, in pounds per month [for each HAP the sum of (b) times (d) for each ink/coating, plus the sum of (f) times (h) for each cleanup material/thinner];

j. the total combined HAP input from all inks/coatings, and cleanup materials/thinner employed, in pounds per month [the sum of (c) times (d) for each ink/coating plus the sum of (g) times (h) for each cleanup material/thinner];

k. the updated rolling, 12-month summation of the input for each individual HAP, in pounds. This shall include the information for the current month and the preceding eleven calendar months; and

l. the updated rolling, 12-month summation of the input for total combined HAPs, in pounds. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly temperature/time deviation (excursion) reports that identify the following:

a. all three (3)-hour blocks of time during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

b. all instances when the set points and alarm activation levels for the temperature of the desorption air stream prior to the concentrator did not comply with the limitations specified in section A.II.3, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation;

c. all instances when the set points and alarm activation levels for the duration of the regeneration cycle did not comply with the limitations specified in section A.II.4, based on the records maintained pursuant to section A.III.4 of these terms and conditions, and the magnitude of each deviation; and

d. all instances when an audible alarm was activated, the cause of each alarm (if known), the time interval of the deviation, the magnitude of the deviation (in degrees Fahrenheit and/or in minutes, as applicable), and the corrective action taken to restore the correct operating parameters.

2. The permittee shall submit annual reports that specify the total OC emissions for emissions units R001 through R022, R025, and R026 combined, for the previous calendar year. These reports shall be submitted to the Northeast District Office of Ohio EPA by January 30 of each year and shall cover the previous calendar year.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations.

V. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. shall be determined in accordance with the following methods:

Emissions Unit ID: **R026**

1.a Emission Limitation:
All OC/VOC emitted by this emissions unit shall be shall be vented to a flow concentrator and thermal oxidizer with a minimum capture efficiency of 100 percent by weight and a minimum destruction efficiency of 95 percent by weight.

Applicable Compliance Method:
Compliance with the above requirement shall be determined through emission testing as outlined in section A.V.2 below. Method 24A shall be used to determine the organic compound contents of the coatings, inks, and cleanup materials.

1.b Emission Limitation:
OC/VOC emissions from all coatings and inks employed in this emissions unit shall not exceed 0.03 pound per hour.

Applicable Compliance Method:
Compliance with the hourly OC/VOC limitation shall be determined using the following equation:

E = MP x G x OC x (1 - RF) x (1 - DE)

where:

E = hourly emission rate, in lbs/hr;
MP = maximum amount of material printed per hour (250 sq. ft./hr);
G = ink usage factor, in gallons of ink/coating per sq. ft. (0.0003 gal/sq. ft.);
OC = maximum ink/coating OC content (7.6 lbs/gal);
RF = solvent retention factor, determined through the 12/30/97 BAT study (0.209); and
DE = minimum fractional destruction efficiency of the control system (0.95).

1.c Emission Limitation:
OC/VOC emissions from all coatings and inks employed in emissions units R001 through R022, R025, and R026 shall not exceed 8.81 lbs/hr and 38.59 tons per year.

Applicable Compliance Method:
Compliance with the annual OC/VOC limit shall be determined by the record keeping specified in section A.III.5.

1.d Emission Limitation:
9.9 tons per year of any single HAP, as a rolling, 12-month summation and 24.9 tons per year of combined HAPs, as a rolling, 12-month summation

Applicable Compliance Method:
Compliance with the annual HAP limitations shall be determined by the record keeping specified in section A.III.6.

2. The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirement.

a. The emissions testing shall be conducted within eighteen (18) months of issuance of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirement specified in section A.I.2.a.

c. 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.

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 Northeast District Office of Ohio EPA.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test' notification to the Northeast District Office of Ohio EPA. 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 Northeast District Office of Ohio EPA's refusal to accept the results of the emissions test(s).

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

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 Northeast District Office of Ohio EPA 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 Northeast District Office of Ohio EPA.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
R026 - twist printing machine no. 2 inkjet printing on vinyl or other substrates, controlled by Regensorb concentrator and thermal oxidizer	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units R001 through R022, R025, and R026 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: MIBK

TLV (mg/m3): 205,000

Maximum Hourly Emission Rate (lbs/hr): 8.81 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227.5

MAGLC (ug/m3): 4,880

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

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

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

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

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

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

"Air Toxic Policy:"

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None