



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:

Lazarus Gov.  
Center

**Application No: 16-02184**

**DATE: 6/4/2002**

Pechiney Plastic Packaging Inc  
Fred Cleary  
1972 Akron-Peninsula Rd  
Akron, OH 44313

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

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

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

Very truly yours,

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

CC: USEPA

ARAQMD



**Permit To Install**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**FINAL PERMIT TO INSTALL 16-02184**

Application Number: 16-02184  
APS Premise Number: 1677000105  
Permit Fee: **\$1600**  
Name of Facility: Pechiney Plastic Packaging Inc  
Person to Contact: Fred Cleary  
Address: 1972 Akron-Peninsula Rd  
Akron, OH 44313

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

**1972 Akron-Peninsula Rd**  
**Akron, Ohio**

Description of proposed emissions unit(s):

**Installation of New Emissions Unit WH-5, Modification of Previous PTIs 16-01928 and 16-02024.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

## Part I - GENERAL TERMS AND CONDITIONS

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

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping 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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.10 below if no deviations occurred during the quarter.

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

## 2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports 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 reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

## 7. Fees

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

## 8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

## 9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with 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 To Install 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 thirty (30) 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.

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

### **1. Compliance Requirements**

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

### **2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping 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 recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. 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. Termination of Permit To Install**

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

## **5. Construction of New Sources(s)**

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

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

## **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**

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**Issued: 6/4/2002**

Facility ID: **1677000105**

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

**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., 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.

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	358.9 tons per rolling, 12-month period for the entire facility
Individual HAP	9.9 tons per rolling, 12-month period for the entire facility
Combined HAPs	24.9 tons per rolling, 12-month period for the entire facility

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

1. Pechiney Plastic Packaging, Inc. requested to restrict the emissions of any individual Hazardous Air Pollutant (HAP) to 9.9 tons per rolling, 12-month period, the emissions of total combined HAPs to 24.9 tons per rolling, 12-month period, and the emissions of volatile organic compounds (VOC) to 358.9 tons per rolling, 12-month period. The company proposed these emission limits to avoid PSD permitting and the Printing and Publishing MACT, 40 CFR Part 63, subpart KK. Pechiney Plastic Packaging, Inc., has accepted these emission limits as a facility-wide caps on emissions from emissions units K003, K006, K008, K010, ~~K012~~, K013, K015, K016, K017, K018, K020, T001, T002, and T003.

2. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Months (s)	Maximum Allowable Cumulative Emissions of VOC	Maximum Allowable Cumulative Emissions of Each Individual HAP HAPS	Maximum Allowable Cumulative Emission Of Total Combined HAPs
1	29.9 tons	1.0 tons	2.0 tons
1-2	59.8 tons	2.0 tons	4.0 tons
1-3	89.7 tons	3.0 tons	6.0 tons
1-4	119.6 tons	4.0 tons	8.0 tons
1-5	149.5 tons	5.0 tons	10.0 tons
1-6	179.5 tons	6.0 tons	12.0 tons
1-7	209.4 tons	6.7 tons	14.2 tons
1-8	239.3 tons	7.3 tons	16.3 tons
1-9	269.2 tons	8.0 tons	18.5 tons
1-10	299.1 tons	8.6 tons	20.6 tons
1-11	329.0 tons	9.3 tons	22.8 tons
1-12	358.9 tons	9.9 tons	24.9 tons

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for VOC, individual HAP, and total combined HAPs shall be based upon a rolling, 12-month summation of the monthly emissions.

3. In order to determine compliance with the facility-wide emission limitations, the permittee shall maintain monthly records of the following information for emissions units K003, K006, K008, K010, K013, K015, K016, K017, K018, K020, T001, T002, and T003:

- a. For emissions units without control equipment ( K017 and K018), the permittee shall collect and record the following information:

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- i. the name and identification of each coating;
- ii. the VOC content of each coating, in weight percent;
- iii. the individual HAP content for each HAP of each coating, in weight percent;
- iv. the total combined HAPs content of each coating, in weight percent (sum all the individual HAP contents from section 3.a.iii);
- v. the total pounds of each coating employed;
- vi. the name and identification of each solvent\* employed;
- vii. the VOC content of each solvent, in weight percent;
- viii. the individual HAP content for each HAP of each solvent, in weight percent;
- ix. the total combined HAPs content of each solvent, in weight percent (sum all the individual HAP contents from section 3.a.viii);
- x. the total pounds of each solvent employed;
- xi. the total uncontrolled individual HAP emissions for each HAP for all coatings and solvents employed, in tons per month (for each HAP, the sum of section 3.a.iii divided by 100 times section 3.a.v for each coating plus the sum of section 3.a.viii divided by 100 times section 3.a.x for each solvent, divided by 2000);
- xii. the uncontrolled total combined HAPs emissions for all coatings and solvents employed, in tons per month (the sum of section 3.a.iv divided by 100 times section 3.a.v for each coating plus the sum of section 3.a.ix divided by 100 times section 3.a.x for each solvent, divided by 2000); and
- xiii. the total uncontrolled VOC emissions for all coatings and solvents employed, in tons per month (the sum of section 3.a.ii divided by 100 times section 3.a.v for each coating plus the sum of section 3.a.vii divided by 100 times section 3.a.x for each solvent, divided by 2000).

\*Solvent is defined as cleanup material and coating thinning material.

- b. For emissions units with control equipment (K003, K006, K008, K010, K013, K015,

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K016, and K020), the permittee shall collect and record the following information:

- i. the name and identification of each coating;

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- ii. the VOC content of each coating in weight percent;
- iii. the individual HAP content for each HAP of each coating, in weight percent;
- iv. the total combined HAPs content of each coating, in weight percent (sum all the individual HAP contents from section 3.b.iii);
- v. the total pounds of each coating employed;
- vi. the name and identification of each solvent\* employed;
- vii. the VOC content of each solvent, in weight percent;
- viii. the individual HAP content for each HAP of each solvent, in weight percent;
- ix. the total combined HAPs content of each solvent, in weight percent (sum all the individual HAP contents from section 3.b.viii);
- x. the total pounds of each solvent employed;
- xi. the total uncontrolled individual HAP emissions for each HAP for all the coatings and solvents employed, in tons per month (for each HAP, the sum of section 3.b.iii divided by 100 times section 3.b.v for each coating plus the sum of section 3.b.viii divided by 100 times section 3.b.x for each solvent, divided by 2000);
- xii. the uncontrolled total combined HAPs emissions for all the coatings and solvents employed, in tons per month (the sum of section 3.b.iv divided by 100 times section 3.b.v for each coating plus the sum of section 3.b.ix divided by 100 times section 3.b.x for each solvent, divided by 2000);
- xiii. the total uncontrolled VOC accounted for in all coatings and solvents employed, in tons per month (the sum of section 3.b.ii divided by 100 times section 3.b.v for each coating plus the sum of section 3.b.vii divided by 100 times section 3.b.x for each solvent, divided by 2000);
- xiv. the total number of coating waste drums;
- xv. the total amount of VOC accounted for in the coating waste drums, in tons per month;

- xvi. the total uncontrolled VOC emissions, in tons per month (section 3.b.xiii minus section 3.b.xv);

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- xvii. the linear feet of material produced by each emissions unit;
- xviii. the total linear feet of material produced by all of emissions units that employ control equipment;
- xix. if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than 9.9 tons per rolling, 12-month period, then the permittee shall calculate the total uncontrolled individual HAP emissions for each HAP for each emissions unit, in tons per month (for each emissions unit section 3.b.xvii divided by section 3.b.xviii and then multiplied by section 3.b.xi);
- xx. if the uncontrolled total combined HAPs emission rate is calculated to be greater than 24.9 tons per rolling, 12-month period, then the permittee shall calculate the uncontrolled total combined HAPs emissions for each emissions unit, in tons per month (for each emissions unit section 3.b.xvii divided by section 3.b.xviii and then multiplied by section 3.b.xii);
- xxi. the total VOC emissions for each emissions unit, in tons per month (for each emissions unit section 3.b.xvii divided by section 3.b.xviii and then multiplied by section 3.b.xvi);
- xxii. if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than 9.9 tons per rolling, 12-month period, then the permittee shall calculate for each emissions unit the controlled individual HAP emission rate for all coatings and solvents, in tons (the controlled emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance);
- xxiii. if the uncontrolled total combined HAPs emission rate is calculated to be greater than 24.9 tons per rolling, 12-month period, then the permittee shall calculate for each emissions unit the controlled total combined HAPs emission rate for all coatings and solvents, in tons (the controlled emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance);
- xxiv. for each emissions unit, the calculated, controlled VOC emission rate for all coatings and solvents, in tons (the controlled emission rate shall be calculated using the overall control efficiency for the control equipment as determined during

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the most recent emission test that demonstrated that the emissions unit was in compliance);

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- xxv. if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than 9.9 tons per rolling, 12-month period, then the permittee shall calculate the total controlled individual HAP emission rate for all the emissions units (sum all the calculated, controlled individual HAP emission rate for each emissions unit from section 3.b.xxii);
- xxvi. if the uncontrolled total combined HAPs emission rate is calculated to be greater than 24.9 tons per rolling, 12-month period, then the permittee shall calculate the controlled total combined HAPs emission rate for all the emissions units (sum all the calculated, controlled total combined HAPs emission rate for each emissions unit from section 3.b.xxiii); and
- xxvii. the total calculated, controlled VOC emission rate for all the emissions units (sum all the calculated, controlled VOC emission rate for each emissions unit from section 3.b.xxiv).

\*Solvent is defined as cleanup material and coating thinning material.

- c. For emissions units with control equipment but vent complying coatings to atmosphere (K010 and K020), the permittee shall collect and record the following information for the coatings that are vented to atmosphere:
  - i. the name and identification of each coating;
  - ii. the VOC content of each coating, in weight percent;
  - iii. the individual HAP content for each HAP of each coating, in weight percent;
  - iv. the total combined HAPs content of each coating, in weight percent (sum all the individual HAP contents from section 3.c.iii);
  - v. the total pounds of each coating employed;
  - vi. the name and identification of each solvent\* employed;
  - vii. the VOC content of each solvent, in weight percent;
  - viii. the individual HAP content for each HAP of each solvent, in weight percent;
  - ix. the total combined HAPs content of each solvent, in weight percent (sum all the

individual HAP contents from section 3.c.viii);

- x. the total pounds of each solvent employed;
- xi. the total uncontrolled individual HAP emissions for each HAP for all coatings and solvents employed, in tons per month (for each HAP, the sum of section 3.c.iii divided by 100 times section 3.c.v for each coating plus the sum of section 3.c.viii divided by 100 times section 3.c.x for each solvent, divided by 2000);
- xii. the uncontrolled total combined HAPs emissions for all coatings and solvents employed, in tons per month (the sum of section 3.c.iv divided by 100 times section 3.c.v for each coating plus the sum of section 3.c.ix divided by 100 times section 3.c.x for each solvent, divided by 2000); and
- xiii. the total uncontrolled VOC emissions for all coatings and solvents employed, in tons per month (the sum of section 3.c.ii divided by 100 times section 3.c.v for each coating plus the sum of section 3.c.vii divided by 100 times section 3.c.x for each solvent, divided by 2000).

\*Solvent is defined as cleanup material and coating thinning material.

- d. For total facility emissions, the permittee shall collect and record the following information:
  - i. the total uncontrolled individual HAP emissions for each HAP for the entire facility, in tons per month (section 3.a.xi plus section 3.b.xi plus section 3.c.xi plus 0.04 ton per month\*);
  - ii. the total uncontrolled combined HAPs emissions for the entire facility, in tons per month (section 3.a.xii plus section 3.b.xii plus section 3.c.xii plus 0.15 ton per month\*);
  - iii. if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than 9.9 tons per rolling, 12-month period, then the permittee shall calculate the controlled total individual HAP emissions for the entire facility, in tons per month (section 3.a.xi plus section 3.b.xxv plus section 3.c.xi plus 0.01 ton per month\*\*);
  - iv. if the uncontrolled total combined HAPs emission rate is calculated to be greater than 24.9 tons per rolling, 12-month period, then the permittee shall calculate the

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controlled total combined HAPs emissions for the entire facility, in tons per month (section 3.a.xii plus section 3.b.xxvi plus section 3.c.xii plus 0.05 ton per month\*\*);

- v. the total VOC emissions for the entire facility, in tons per month (section 3.a.xiii plus section 3.b.xxvii plus section 3.c.xiii plus 0.25 ton per month\*\*\* plus 0.03 ton per month\*\*\*\*);
- vi. during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative uncontrolled emissions of each individual HAP for the entire facility for each calendar month;
- vii. during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative uncontrolled emissions of total combined HAPs for the entire facility for each calendar month;
- viii. during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative emissions of VOC for the entire facility for each calendar month;
- ix. during the first 12 calendar months of operation following the issuance of this permit and if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than the maximum allowable cumulative emission rate, then the permittee shall record the cumulative controlled emissions of each individual HAP for the entire facility for each calendar month;
- x. during the first 12 calendar months of operation following the issuance of this permit and if the uncontrolled total combined HAPs emission rate is calculated to be greater than the maximum allowable cumulative emission rate, then the permittee shall record the cumulative controlled emissions of total combined HAPs for the entire facility for each calendar month;
- xi. beginning after the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling, 12-month summation of the monthly uncontrolled emissions of each individual HAP for the entire facility for each calendar month;
- xii. beginning after the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling, 12-month summation of the monthly uncontrolled emissions of total combined HAPs for the entire facility for each calendar month;
- xiii. beginning after the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling, 12-month summation of the

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monthly emissions of VOC for the entire facility for each calendar month;

- xiv. beginning after the first 12 calendar months of operation following the issuance of this permit and if the uncontrolled individual HAP emission rate for any HAP is calculated to be greater than 9.9 tons per rolling, 12-month period, then the permittee shall record the rolling, 12-month summation of the monthly controlled emissions of each individual HAP for the entire facility for each calendar month; and
- xv. beginning after the first 12 calendar months of operation following the issuance of this permit and if the uncontrolled total combined HAPs emission rate is calculated to be greater than 24.9 tons per rolling, 12-month period, then the permittee shall record the rolling, 12-month summation of the monthly controlled emissions of total combined HAPs for the entire facility for each calendar month.

\*The uncontrolled HAP/HAPs emissions from the natural gas combustion from the incinerators (oxidizers) and ovens.

\*\*The controlled HAP/HAPs emissions from the natural gas combustion from the incinerators (oxidizers) and ovens.

\*\*\*The controlled VOC emissions from the natural gas combustion from the incinerators (oxidizers) and ovens.

\* \*\* The potential to emit for VOC for the three storage tanks is 3.0 tons per year (0.25 ton per month). The storage tanks do not store any HAP.

- 4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for VOC, individual HAP, and total combined HAPs and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition (A)(1)(c).
- 5. The permittee shall submit annual reports that specify the following information:
  - a. for the entire facility, the rolling, 12-month summations of monthly emissions of VOC, individual HAP, and total combined HAPs for each month during the calendar year (January through December);
  - b. for the entire facility, the cumulative emissions of VOC, individual HAP, and total combined HAPs for each month for the first 12 calendar months of operation following the issuance of this permit; and

- c. for each emissions unit, the VOC emission rate, in tons per year.

The annual reports shall be submitted by January 31 of each year, and shall cover the records for the previous calendar year (January through December). This reporting requirement may be satisfied by including and identifying the specific emission data (VOC, individual HAPs, and combined HAPs) for each emissions unit in the facility's annual Fee Emission Report.

6. Compliance with the emission limitations in section A.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

9.9 tons of HAP per rolling, 12-month period  
24.9 tons of HAPs per rolling, 12-month period  
358.9 tons of VOC per rolling, 12-month period

Applicable Compliance Method:

In accordance with sections A.3, A.3.a, A.3.b, and A.3.c of these terms and conditions, the permittee shall maintain monthly records of the VOC content, individual HAP content, and total combined HAPs content, in weight percent, as applied, of each coating and solvent and the total pounds of each coating and solvent employed. Formulation data or USEPA Method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the VOC contents of the coatings and inks. Formulation data shall be used to determine the HAP contents of the coatings and solvents.

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

None

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K008 - 6-color flexographic printing press with in-line lamination and a backside printing gravure station - WH-2 (the terms and conditions in this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000).	OAC rule 3745-31-05(A)(3)	85.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)
	OAC rule 3745-21-09(Y)(1)(b)	109 tons of VOC per year  See A.I.2.b below.  The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.
- 2.b The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 78 percent, by weight, for VOC.

## II. Operational Restrictions

1. The emissions from this emissions unit shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.
2. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
3. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
4. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
6. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
7. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
8. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall

be free of leaks and holes that would permit the escape of the captured VOC emissions.

9. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, shall not be less than 3,215 standard cubic feet per minute (scfm) or shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than

50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and

- b. A log of operating time for the capture (collection) system, thermal incinerator (*oxidizer*), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the

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current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that the process line be immediately shut down and remain shut down until the problem has been corrected.
11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts

shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - d. all 3-hour blocks of time-(when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.9, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.
5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

## **V. Testing Requirements**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of emissions unit K020 or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance with the 90 percent,

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by weight, control efficiency limitation for VOC. (Capture efficiency testing to demonstrate compliance with the applicable 78 percent capture efficiency limitation was performed on January 29, 1999 on emissions unit K003 which is an identical emissions unit to K008.)

- c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
  - g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm.
2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
  3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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4. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

85.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1-0.7\*).

\*overall control efficiency based on the capture efficiency requirement of 78%, by weight and the control efficiency requirement of 90%, by weight.

- b. Emission Limitation:

109 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

- c. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

d. Emission Limitation:

A capture efficiency which is at least 78 percent, by weight, for VOC.

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Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K008 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K008 - 6-color flexographic printing press with in-line lamination and a backside printing gravure station - WH-2 (the terms and conditions in this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000).	None	See B.III.1 below.

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K008) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was

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compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m3): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 11,628

MAGLC (ug/m3): 11,714

Pollutant: n-propyl acetate

TLV (mg/m3): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 4,505

MAGLC (ug/m3): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 6,222

MAGLC (ug/m3): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m3): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 3,081

MAGLC (ug/m3): 14,048

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Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K010 - 6-color flexographic printing press with a laminator and a backside printing station(the terms and conditions in this permit supercede the terms and conditions in PTI 16-01928 issued on 6/7/2001) - WH-3.	OAC rule 3745-31-05(A)(3)	222.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)  109 tons of VOC per year  See A.I.2.b and A.I.2.c below.
	OAC rule 3745-21-09(Y)(1)(a)	The emission limitation specified by this rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-09(Y)(1)(b)	The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.
- 2.b The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 78 percent, by weight, for VOC.

- 2.c** When venting the VOC emissions from the laminator to the atmosphere, the volatile organic compound content of the coatings and inks shall not exceed the following:
- i. forty percent VOC by volume of the coating or ink, excluding water and exempt solvents; or
  - ii. twenty-five percent VOC by volume of the volatile matter in the coating or ink.

## **II. Operational Restrictions**

1. The VOC emissions from the 6-color flexographic printing press and the backside printing station shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.
2. When employing a coating on the laminator that meets the requirements of term and condition A.I.2.c above, the VOC emissions from the laminator may be vented to the atmosphere.
3. When employing a coating on the laminator that does not meet the requirements of term and condition A.I.2.c above, the VOC emissions shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
4. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
6. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
7. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal

temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.

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8. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
9. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
10. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
11. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, shall not be less than 8,147 standard cubic feet per minute (scfm) or shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 except for time periods when the emissions from the laminator are vented to the atmosphere as allowed by term and condition A.I.2.c and the emissions from the 6-color flexographic printing press and the backside printing press are vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary

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by the permittee.

3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer),

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monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that

the process line be immediately shut down and remain shut down until the problem has been corrected.

11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
14. The permittee shall collect and record the following information each month for the coatings employed on the laminator that are vented to the atmosphere:
  - a. the name and identification number of each coating and ink, as applied; and
  - b. the VOC content in percentage VOC by volume of each coating and ink (excluding water and exempt solvents); or
  - c. the VOC content in percentage VOC by volume of the volatile matter in each coating and ink.

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(This information does not have to be kept on a line-by-line basis, unless one or more of the lines is a new emissions unit and subject to specific "gallons/year" and "tons/year" limitations, or just a "tons/year" limitation in a Permit to Install. In such cases, for each such new emissions unit only, the above-mentioned information must be maintained separately for that line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.)

15. If a job specification calls for a coating to be employed on the laminator that does not comply with the requirements of term and condition A.I.2.c, then the permittee shall maintain the following information in a log:
  - a. the date;
  - b. confirmation that the VOC emissions from the noncomplying coatings were diverted to one of the incinerators (oxidizers); and
  - c. the personnel initials.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 except for time periods when the emissions from the laminator are vented to the atmosphere as allowed by term and condition A.I.2.c and the emissions from the 6-color flexographic printing press and the backside printing press are vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;

- c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
- d. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
- e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.11, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.

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5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

**V. Testing Requirements**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of emissions unit K020 or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance with the 90 percent, by weight control efficiency limitation for VOC.(Capture efficiency testing to demonstrate compliance with the applicable 78 percent capture efficiency limitation was performed on January 27-28, 1999.)
  - c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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- g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator, in scfm.

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2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
4. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

222.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1-0.7\*).

\*overall control efficiency based on the capture efficiency requirement of 78%, by weight

and the control efficiency requirement of 90%, by weight.

b. Emission Limitation:

109 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

c. Emission Limitation:

forty percent VOC by volume of the coating and ink, excluding water and exempt solvents or twenty-five percent VOC by volume of the volatile matter in the coating and ink

Applicable Compliance Method:

OAC rule 3745-21-10(B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

d. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

e. Emission Limitation:

A capture efficiency which is at least 78 percent, by weight, for VOC.

Applicable Compliance Method:

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If required, compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K010 in Permit to Install 16-01928, issued on June 7, 2001.

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K010 - 6-color flexographic printing press with a laminator and a backside printing station(the terms and conditions in this permit supercede the terms and conditions in PTI 16-01928 issued on 6/7/2001) - WH-3.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "E5" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K010) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was

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compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m3): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 11,628

MAGLC (ug/m3): 11,714

Pollutant: n-propyl acetate

TLV (mg/m3): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 4,505

MAGLC (ug/m3): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 6,222

MAGLC (ug/m3): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m3): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 3,081

MAGLC (ug/m3): 14,048

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Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K013 - 6-color flexographic printing press with in-line lamination (the terms and conditions of this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000) - WH-IV.	OAC rule 3745-31-05(A)(3)	100.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)
	OAC rule 3745-21-09(Y)(1)(b)	109 tons of VOC per year
		See A.I.2.b below.
		The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.
- 2.b The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 78 percent, by weight, for VOC.

**II. Operational Restrictions**

- 1. The emissions from this emissions unit shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.

2. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
3. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
4. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
6. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
7. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
8. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

9. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, shall not be less than 1,738 standard cubic feet per minute (scfm) or shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test

that demonstrated the emissions unit(s) was (were) in compliance; and

- b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
  7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
    - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and

control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that the process line be immediately shut down and remain shut down until the problem has been corrected.
11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections,

including any corrective actions taken.

13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - d. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.9, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.
5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

## V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of emissions unit K020 or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance with the 90 percent,

Emissions Unit ID: K013

by weight control efficiency limitation for VOC. (Capture efficiency testing to demonstrate compliance with the applicable 78 percent capture efficiency limitation was performed on January 21-22, 1999.)

- c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
  - g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator, in scfm.
2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
  3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  4. A comprehensive written report on the results of the emission test(s) shall be signed by the person

Emissions Unit ID: K013

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

5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

100.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1-0.7\*).

\*overall control efficiency based on the capture efficiency requirement of 78%, by weight and the control efficiency requirement of 90%, by weight.

b. Emission Limitation:

109 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

c. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified

in section A.V.1.

d. Emission Limitation:

A capture efficiency which is at least 78 percent, by weight, for VOC.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K013 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K013 - 6-color flexographic printing press with in-line lamination (the terms and conditions of this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000) - WH-IV.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "E5" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K013) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 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: n-propyl alcohol

TLV (mg/m3): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 11,628

MAGLC (ug/m3): 11,714

Pollutant: n-propyl acetate

TLV (mg/m3): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 4,505

MAGLC (ug/m3): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 6,222

MAGLC (ug/m3): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m3): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 3,081

MAGLC (ug/m3): 14,048

86

Pechin

PTI A<sub>1</sub>

**Issued: 6/4/2002**

Emissions Unit ID: K013

Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K015 - 6-color flexographic printing press with in-line lamination (the terms and conditions in this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000) - SOLO I.	OAC rule 3745-31-05(A)(3)	18.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)  50 tons of VOC per year  See A.I.2.b below.
	OAC rule 3745-21-09(Y)(1)(b)	The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.
- 2.b The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 78 percent, by weight, for VOC.

**II. Operational Restrictions**

1. The emissions from this emissions unit shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.

2. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
3. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
4. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
6. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
7. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
8. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

9. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, shall not be less than 411 standard cubic feet per minute (scfm) or shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test

that demonstrated the emissions unit(s) was (were) in compliance; and

- b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
  7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
    - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and

control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that the process line be immediately shut down and remain shut down until the problem has been corrected.
11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections,

including any corrective actions taken.

13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - d. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.9, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.
5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

## V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of emissions unit K020 or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance with the 90 percent,

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by weight control efficiency limitation for VOC. (Capture efficiency testing to demonstrate compliance with the applicable 78 percent capture efficiency limitation was performed on February 2, 1999.)

- c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
  - g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator, in scfm.
2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
  3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  4. A comprehensive written report on the results of the emission test(s) shall be signed by the person

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

5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

18.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1-0.7\*).

\*overall control efficiency based on the capture efficiency requirement of 78%, by weight and the control efficiency requirement of 90%, by weight.

- b. Emission Limitation:

50 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

- c. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified

in section A.V.1.

d. Emission Limitation:

A capture efficiency which is at least 78 percent, by weight, for VOC.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K015 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K015 - 6-color flexographic printing press with in-line lamination (the terms and conditions in this permit supercede the terms and conditions in PTI 16-02024 issued on 5/24/2000) - SOLO I.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "F1" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K015) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was

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compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m3): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 11,628

MAGLC (ug/m3): 11,714

Pollutant: n-propyl acetate

TLV (mg/m3): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 4,505

MAGLC (ug/m3): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 6,222

MAGLC (ug/m3): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m3): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 3,081

MAGLC (ug/m3): 14,048

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Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K016 - 8-color flexographic printing press with a one color outboard flexographic station (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - PC VISION.	OAC rule 3745-31-05(A)(3)	34.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)
	OAC rule 3745-21-09(Y)(1)(b)	109 tons of VOC per year  See A.I.2.b below.  The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.
- 2.b The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 78 percent, by weight, for VOC.

**II. Operational Restrictions**

1. The emissions from this emissions unit shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.

2. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
3. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
4. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
6. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
7. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
8. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

9. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, shall not be less than 1,761 standard cubic feet per minute (scfm) or shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test

that demonstrated the emissions unit(s) was (were) in compliance; and

- b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
  7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
    - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
    - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
    - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and

control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that the process line be immediately shut down and remain shut down until the problem has been corrected.
11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections,

including any corrective actions taken.

13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - d. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.9, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.
5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

## **V. Testing Requirements**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of emissions unit K020 or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance with the 90 percent,

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by weight control efficiency limitation for VOC. (Capture efficiency testing to demonstrate compliance with the applicable 78 percent efficiency limitation was performed on January 31 - February 1, 1999.)

- c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
  - g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator, in scfm.
2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
  3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  4. A comprehensive written report on the results of the emission test(s) shall be signed by the person

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

5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

34.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1-0.7\*).

\*overall control efficiency based on the capture efficiency requirement of 78%, by weight and the control efficiency requirement of 90%, by weight.

- b. Emission Limitation:

109 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

- c. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified

in section A.V.1.

d. Emission Limitation:

A capture efficiency which is at least 78 percent, by weight, for VOC.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K016 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K016 - 8-color flexographic printing press with a one color outboard flexographic station (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - PC VISION.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "F1" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

- 1. The permit to install for this emissions unit (K016) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour

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maximum ground-level concentration from the use of the ISCST3 Version 00101 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: n-propyl alcohol

TLV (mg/m3): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 11,628

MAGLC (ug/m3): 11,714

Pollutant: n-propyl acetate

TLV (mg/m3): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 4,505

MAGLC (ug/m3): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 6,222

MAGLC (ug/m3): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m3): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 3,081

MAGLC (ug/m3): 14,048

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Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K017 - 9-color narrow flexographic printing press and laminator (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - Comco II.	OAC rule 3745-31-05(A)(3)	10.0 pounds of volatile organic compounds (VOC) per hour  10.0 tons of VOC per year
	OAC rule 3745-21-09(Y)(1)(a)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(Y)(1)(a).  See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The volatile organic compound content of the coatings and inks shall not exceed the following limitations:
  - a. forty percent VOC by volume of the coating or ink, excluding water and exempt solvents; or
  - b. twenty-five percent VOC by volume of the volatile matter in the coating or ink.
- 2.b The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.

**II. Operational Restrictions**

None

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for the line:
  - a. the name and identification number of each coating and ink, as applied; and
  - b. the VOC content in percentage VOC by volume of each coating and ink (excluding water and exempt solvents); or
  - c. the VOC content in percentage VOC by volume of the volatile matter in each coating and ink.

(This information does not have to be kept on a line-by-line basis, unless one or more of the lines is a new emissions unit and subject to specific "gallons/year" and "tons/year" limitations, or just a "tons/year" limitation in a Permit to Install. In such cases, for each such new emissions unit only, the above-mentioned information must be maintained separately for that line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.)

2. The permittee shall maintain monthly records of the following information:
  - a. the linear feet of material produced by this emissions unit;
  - b. the total linear feet of material produced by all of the emissions units that do not employ control equipment;
  - c. the average, uncontrolled VOC emission rate for this emissions unit, in tons per month (A.III.2.a divided by A.III.2.b, and then multiplied by A.3.a.xiii of Part II - Specific Facility Terms and Conditions).

### IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any monthly record showing the use of noncomplying coatings (for VOC content). The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.
2. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of

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each year.

**V. Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

forty percent VOC by volume of the coating and ink, excluding water and exempt solvents or twenty-five percent VOC by volume of the volatile matter in the coating and ink

Applicable Compliance Method:

OAC rule 3745-21-10(B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

- b. Emission Limitation:

10.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet.

- c. Emission Limitation:

10.0 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.a of this permit and section A.III.2 above.

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Pechiney Plastic Packaging Inc

PTI Application: 16-02184

**Issued**

Facility ID: 1677000105

Emissions Unit ID: K017

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Emissions Unit ID: K017

**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K017 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K017 - 9-color narrow flexographic printing press and laminator (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - Comco II.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "F1" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

- 1. The permit to install for this emissions unit (K017) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was

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compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m<sup>3</sup>): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 11,628

MAGLC (ug/m<sup>3</sup>): 11,714

Pollutant: n-propyl acetate

TLV (mg/m<sup>3</sup>): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 4,505

MAGLC (ug/m<sup>3</sup>): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m<sup>3</sup>): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 6,222

MAGLC (ug/m<sup>3</sup>): 23,405

Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level

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Pechiney Plastic Packaging Inc

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**Issued**

Facility ID: 1677000105

Emissions Unit ID: K017

Concentration (ug/m3): 12,419

MAGLC (ug/m3): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

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

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

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K018 - 9-color narrow flexographic printing press and laminator (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - Comco III	OAC rule 3745-31-05(A)(3)	10.0 pounds of volatile organic compounds (VOC) per hour  10.0 tons of VOC per year  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(Y)(1)(a).
	OAC rule 3745-21-09(Y)(1)(a)	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The volatile organic compound content of the coatings and inks shall not exceed the following limitations:
  - a. forty percent VOC by volume of the coating or ink, excluding water and exempt solvents; or
  - b. twenty-five percent VOC by volume of the volatile matter in the coating or ink.
- 2.b The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.

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## **II. Operational Restrictions**

None

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for the line:
  - a. the name and identification number of each coating and ink, as applied; and
  - b. the VOC content in percentage VOC by volume of each coating and ink (excluding water and exempt solvents); or
  - c. the VOC content in percentage VOC by volume of the volatile matter in each coating and ink.

(This information does not have to be kept on a line-by-line basis, unless one or more of the lines is a new emissions unit and subject to specific "gallons/year" and "tons/year" limitations, or just a "tons/year" limitation in a Permit to Install. In such cases, for each such new emissions unit only, the above-mentioned information must be maintained separately for that line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.)

2. The permittee shall maintain monthly records of the following information:
  - a. the linear feet of material produced by this emissions unit;
  - b. the total linear feet of material produced by all of the emissions units that do not employ control equipment;
  - c. the average, uncontrolled VOC emission rate for this emissions unit, in tons per month (A.III.2.a divided by A.III.2.b, and then multiplied by A.3.a.xiii of Part II - Specific Facility Terms and Conditions).

### IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any monthly record showing the use of noncomplying coatings (for VOC content). The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.
2. The permittee shall also submit annual reports that specify the total VOC emissions from this

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emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

## V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

forty percent VOC by volume of the coating and ink, excluding water and exempt solvents or twenty-five percent VOC by volume of the volatile matter in the coating and ink

Applicable Compliance Method:

OAC rule 3745-21-10(B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

- b. Emission Limitation:

10.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet.

- c. Emission Limitation:

10.0 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.a of this

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permit and section A.III.2 above.

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**VI. Miscellaneous Requirements**

1. The terms and conditions of this Permit to Install 16-02184 shall supersede all the air pollution control requirements for K018 in Permit to Install 16-02024, issued on May 24, 2000.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K018 - 9-color narrow flexographic printing press and laminator (the terms and conditions of this permit supercede the terms and conditions of PTI 16-02024 issued on 5/24/2000) - Comco III	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "F1" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K018) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was

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compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m<sup>3</sup>): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 11,628

MAGLC (ug/m<sup>3</sup>): 11,714

Pollutant: n-propyl acetate

TLV (mg/m<sup>3</sup>): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 4,505

MAGLC (ug/m<sup>3</sup>): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m<sup>3</sup>): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 6,222

MAGLC (ug/m<sup>3</sup>): 23,405

Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level

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Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

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

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

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K020 - 10 color flexographic printing press with turboclean inking/washup system, in-line adhesive station, and two color in-line backside flexo station (new installation) - WH-5.	OAC rule 3745-31-05(A)(3)	124.0 pounds of volatile organic compounds (VOC) per hour (See A.I.2.a below.)  109 tons of VOC per year  See A.I.2.b and A.I.2.c below.
	OAC rule 3745-21-09(Y)(1)(a)	The emission limitation specified by this rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-09(Y)(1)(b)	The emission control requirements based on this applicable rule are less stringent than or equivalent to the emission control requirements established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a The hourly VOC emission limitation is based on the emissions unit's potential to emit. Therefore, no record keeping or reporting is required to demonstrate compliance with this limit.

- 2.b** The printing line shall be equipped with a capture system and associated control system which are designed and operated to achieve a control efficiency which is at least 90 percent, by weight, and a capture efficiency which is at least 90 percent, by weight, for VOC.
- 2.c** When venting the VOC emissions from the laminator to the atmosphere, the volatile organic compound content of the coatings and inks shall not exceed the following:
- i. forty percent VOC by volume of the coating or ink, excluding water and exempt solvents; or
  - ii. twenty-five percent VOC by volume of the volatile matter in the coating or ink.

## II. Operational Restrictions

1. The VOC emissions from the 10-color flexographic printing press and the backside printing stations shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 when the emissions unit is in operation.
2. When employing a coating on the laminator that meets the requirements of term and condition A.I.2.c above, the VOC emissions from the laminator may be vented to the atmosphere.
3. When employing a coating on the laminator that does not meet the requirements of term and condition A.I.2.c above, the VOC emissions shall be vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
4. When thermal incinerator (oxidizer) #1 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
5. When thermal incinerator (oxidizer) #2 is in use, the average combustion temperature within thermal incinerator (oxidizer), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
6. When catalytic incinerator (oxidizer) #2 is in use, the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.

7. The catalytic incinerator (oxidizer) #2 shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic incinerator (oxidizer), as determined by the catalyst activity testing, shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during the catalyst analysis shall be consistent with the test laboratory's normal testing protocol.

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8. This emissions unit shall be operated with an interlock system that prevents the operation of this emissions unit when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii) are utilized and the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation.
9. All ventilation fans associated with this emissions unit and the incinerator (oxidizer), to which the emission unit's VOC emissions are being vented, shall be in operation at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii).
10. All bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii), to ensure that all captured VOC emissions are vented to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
11. The average, total exhaust flow rate from this emissions unit to the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, in standard cubic feet per minute (scfm), shall not be less than the exhaust flow rate documented during the last emission tests that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 except for time periods when the emissions from the laminator are vented to the atmosphere as allowed by term and condition A.I.2.c and the emissions from the 10-color flexographic printing press and the backside printing presses are vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2.
2. When thermal incinerator (oxidizer) #1 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary.

by the permittee.

3. When thermal incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator (oxidizer). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. When catalytic incinerator (oxidizer) #2 is in use, the permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's (oxidizer's) catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
5. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #1 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
  - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
6. The permittee shall collect and record the following information for each day when thermal incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within the thermal incinerator (oxidizer) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. A log of operating time for the capture (collection) system, thermal incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and

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control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.

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7. The permittee shall collect and record the following information for each day when catalytic incinerator (oxidizer) #2 is in use:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance. The permittee may use the incinerator's (oxidizer's) temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of operating time for the capture (collection) system, catalytic incinerator (oxidizer), monitoring equipment, and the associated emissions unit. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Bypass of the collection system by the emissions unit shall be logged as to the date and time.
8. The permittee shall perform an inspection of the catalytic incinerator (oxidizer), including the catalyst bed, on at least an annual basis. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, as specified in the document entitled "Recommended Annual Inspection Points and Procedures" as submitted to the Ohio EPA on February 26, 2002, and shall include a physical inspection of the unit and checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in section A.V.5, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in section A.V.5.
9. The permittee shall maintain a record of the results of each annual inspection of the catalytic incinerator (oxidizer), as well as the results of each catalyst activity test required in section A.V.5.
10. On an annual basis, the permittee shall inspect the electronics of each interlock system used for this emissions unit to verify the signals between each incinerator (oxidizer) and the emissions unit are functioning properly. The permittee shall document the results of all annual inspections. An excursion is defined as a finding that an interlock is inoperative. Any excursion shall require that the process line be immediately shut down and remain shut down until the problem has been corrected.

11. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the total exhaust flow rate from this emissions unit to the incinerator (oxidizer), in scfm. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and all other printing lines at the facility are in a normal mode of operation. The permittee shall maintain records of the results of all exhaust flow rate measurements.

If the total exhaust flow rate measurements for four consecutive quarters do not identify a deviation of the applicable operational restriction, the permittee may perform the total exhaust flow rate measurements on a semiannual basis. Should the total exhaust flow rate measurements taken on a semiannual basis identify a deviation of the applicable operational restriction, the permittee shall revert to quarterly measurements.

12. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
13. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections for leaks or holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to incinerator (oxidizer) or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
14. The permittee shall collect and record the following information each month for the coatings employed on the laminator that are vented to the atmosphere:
  - a. the name and identification number of each coating and ink, as applied; and
  - b. the VOC content in percentage VOC by volume of each coating and ink (excluding water and exempt solvents); or
  - c. the VOC content in percentage VOC by volume of the volatile matter in each coating and ink.

(This information does not have to be kept on a line-by-line basis, unless one or more of the lines is a new emissions unit and subject to specific "gallons/year" and "tons/year" limitations, or just a "tons/year" limitation in a Permit to Install. In such cases, for each such new emissions unit only, the above-mentioned information must be maintained separately for that line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.)

15. If a job specification calls for a coating to be employed on the laminator that does not comply with the requirements of term and condition A.I.2.c, then the permittee shall maintain the following information in a log:
  - a. the date;
  - b. confirmation that the VOC emissions from the noncomplying coatings were diverted to one of the incinerators (oxidizers); and
  - c. the personnel initials.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the emissions from the emissions unit were not vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2 except for time periods when the emissions from the laminator are vented to the atmosphere as allowed by term and condition A.I.2.c and the emissions from the 10-color flexographic printing press and the backside printing presses are vented to either thermal incinerator (oxidizer) #1, thermal incinerator (oxidizer) #2, or catalytic incinerator (oxidizer) #2. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly summaries of the following records:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #1 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature within thermal incinerator (oxidizer) #2 was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as

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determined by the continuous temperature monitor) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance;

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- d. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit(s) was (were) in compliance; and
- e. a log of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

NOTE: Information submitted pursuant to section A.IV.2.d is not relevant for determining compliance with any operational restrictions contained in section A.II.

3. The permittee shall submit reports that include the results of the catalyst activity tests required in section A.V.5. These reports shall be submitted within 45 days after each catalyst activity test is performed.
4. The permittee shall submit quarterly deviation (excursion) reports that identify the following events when this emissions unit is utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(Y)(1)(a)(i) or (ii):
  - a. each time the interlock system stops the operation of this emissions unit because the incinerator (oxidizer), to which the emissions unit's VOC emissions are being vented, is not in operation;
  - b. each average, total exhaust flow rate measurement that does not comply with the operational restriction specified in section A.II.11, based on the records maintained pursuant to section A.III.11 of these terms and conditions, and the magnitude of each deviation; and
  - c. each time any bypass dampers, actuator pins, and/or associated motors are not in the correct position and in good operating condition and/or any of the hooding or ductwork comprising the VOC emission capture system contains leaks or holes that would permit the escape of the captured VOC emissions.
5. The permittee shall submit annual reports that specify the results of each annual inspection of the electronics of the ventilation fan interlock systems and each incinerator (oxidizer) interlock systems, based on the records maintained pursuant to section A.III.10 of these terms and conditions.
6. The permittee shall also submit annual reports that specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of

each year.

## V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 150 days of start-up of this emissions unit or by December 31, 2002, whichever is sooner.
  - b. The emission testing shall be conducted to demonstrate compliance the 90 percent, by weight, capture efficiency limitation and 90 percent, by weight, control efficiency limitation for VOC.
  - c. The test method(s) which must be employed to demonstrate compliance with the capture and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
  - f. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
  - g. During each test run, the permittee shall measure the total exhaust flow rate from this emissions unit to the incinerator, in scfm.
2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to

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Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
4. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
5. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in section A.III.8. An intent to test notification shall not be required for the testing noted in this term. The procedures for the catalyst activity test shall be in accordance with the manufacturer's recommendations.
6. Compliance with the emission limitations and control efficiency requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

124.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with this emission limitation has been determined by multiplying the maximum line speed in feet per minute by 60 minutes per hour times the maximum print/coat width in feet times the maximum pounds of VOC per ream times one ream per 3000 square feet times (1 - 0.81\* ).

\*overall control efficiency based on the capture efficiency requirement of 90%, by weight and the control efficiency requirement of 90%, by weight.

b. Emission Limitation:

109 tons of VOC per year

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the records required pursuant to Part II - Specific Facility Terms and Conditions section A.3.b of this permit.

c. Emission Limitation:

forty percent VOC by volume of the coating and ink, excluding water and exempt solvents or twenty-five percent VOC by volume of the volatile matter in the coating and ink

Applicable Compliance Method:

OAC rule 3745-21-10(B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

d. Emission Limitation:

A control efficiency which is at least 90 percent, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

e. Emission Limitation:

A capture efficiency which is at least 90 percent, by weight, for VOC.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.1.

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**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K020 - 10 color flexographic printing press with turboclean inking/washup system, in-line adhesive station, and two color in-line backside flexo station (new installation) - WH-5.	None	See B.I.2.a and B.III.1 below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall increase the stack height of "F1" to 56.3 feet above the ground within 90 days after the final permit to install is issued.

**II. Operational Restrictions**

None

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

1. The permit to install for this emissions unit (K020) 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 ISCST3 Version 00101 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 Version 00101 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following

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summarizes the results of the modeling for the "worst case" pollutant(s):

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Pollutant: n-propyl alcohol

TLV (mg/m<sup>3</sup>): 492

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 11,628

MAGLC (ug/m<sup>3</sup>): 11,714

Pollutant: n-propyl acetate

TLV (mg/m<sup>3</sup>): 835

Maximum Hourly Emission Rate (lbs/hr): 74.26\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 4,505

MAGLC (ug/m<sup>3</sup>): 19,881

Pollutant: isopropyl alcohol

TLV (mg/m<sup>3</sup>): 983

Maximum Hourly Emission Rate (lbs/hr): 100.96\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 6,222

MAGLC (ug/m<sup>3</sup>): 23,405

Pollutant: methyl ethyl ketone

TLV (mg/m<sup>3</sup>): 590

Maximum Hourly Emission Rate (lbs/hr): 43.90\*\*

Predicted 1-Hour Maximum Ground-Level

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Concentration (ug/m<sup>3</sup>): 3,081

MAGLC (ug/m<sup>3</sup>): 14,048

Pollutant: ethyl alcohol

TLV (mg/m<sup>3</sup>): 1880

Maximum Hourly Emission Rate (lbs/hr): 194.48\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 12,419

MAGLC (ug/m<sup>3</sup>): 44,762

Pollutant: ethyl acetate

TLV (mg/m<sup>3</sup>): 1440

Maximum Hourly Emission Rate (lbs/hr): 276.98\*

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m<sup>3</sup>): 18,351

MAGLC (ug/m<sup>3</sup>): 34,286

\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, K017, K018, and K020.

\*\*Combined increase in the allowable emission rate multiplied by the maximum air toxic pollutant weight ratio for emissions units K008, K010, K013, K015, K016, and K020.

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.).
2. 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.

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