



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

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

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

**Application No: 13-03807**

**Fac ID: 1318558062**

**DATE: 4/12/2007**

Avery Dennison Ind and Auto Products Div  
Kevin Weeks  
17700 Foltz Parkway  
Strongsville, OH 44149

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

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

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

Sincerely,

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

CC: USEPA

CLAA



**Permit To Install  
Terms and Conditions**

**Issue Date: 4/12/2007  
Effective Date: 4/12/2007**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-03807**

Application Number: 13-03807  
Facility ID: 1318558062  
Permit Fee: **\$2000**  
Name of Facility: Avery Dennison Ind and Auto Products Div  
Person to Contact: Kevin Weeks  
Address: 17700 Foltz Parkway  
Strongsville, OH 44149

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**17700 Foltz Parkway  
Strongsville, Ohio**

Description of proposed emissions unit(s):  
**Administrative modification. Presses K003, and K012-K017 have been shut down, the address is incorrect and the company wishes to align record keeping/reporting with PTI 1304574.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director

## 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

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

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## **2. Scheduled Maintenance/Malfunction Reporting**

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

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

## **3. Risk Management Plans**

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

#### **4. Title IV Provisions**

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

#### **5. Severability Clause**

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

#### **6. General Requirements**

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

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## **7. Fees**

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

## **8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

## **9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

- iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

#### 10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### 11. Best Available Technology

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

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**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.

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### **13. Permit-To-Install**

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

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

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or 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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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**4. Authorization To Install or Modify**

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

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

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

**6. Public Disclosure**

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

**7. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**8. Construction Compliance Certification**

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

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

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

**C. Permit-To-Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	98.0

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

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

None

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

None

**Avery  
PTI A**

Emissions Unit ID: K001

**Modification Issued: 4/12/2007**

**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>
K001 - Narrow web continuous flexographic printing press - 641	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 21.17 lbs/hour and 8.32 tons per rolling, 12-month period from all inks, coatings and cleanup materials.
MODIFIED		
The terms and conditions in this permit supersede the terms in PTI 13-03807 issued on 8/1/2006.		See Section A.I.2.c.  The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).
	OAC rule 3745-21-09(Y)(2)(b)	The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).
	OAC rule 3745-31-05(C) Synthetic Minor for purposes of avoiding non-attainment new source review	See Sections A.I.2.b. and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, , K004, K005, K006, K007,

Emissions Unit ID: K001

K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.

- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

## **II. Operational Restrictions**

- 1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

## **III. Monitoring and/or Record keeping Requirements**

- 1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount

Emissions Unit ID: K001

(gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.

2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
3. The permittee shall collect and record the following information for this emission unit each month:
  - a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:

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- a. the date the materials from the recovery drum or tank were shipped off site;
- b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
- c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
- d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
- e. the average VOC emissions from the recovered cleanup/purge materials  $[(4.b) \times (4.d)]$  in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as  $[(4.b) \times (4.c) \times (4.d)]$  if the material amount is recorded in gallons.

**IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

**V. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:

Emissions Unit ID: K001

21.17 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
8.32 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

**Avery  
PTI A**

Emissions Unit ID: K001

**Modification Issued: 4/12/2007**

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

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- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.
- Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.
- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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PTI A**

Emissions Unit ID: K002

**Modification Issued: 4/12/2007**

**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>
K001 - Narrow web continuous flexographic printing press - 641 None	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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



**Modification Issued: 4/12/2007****2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.1.2.a):
- a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions

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Emissions Unit ID: K002

from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and

- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
  - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
- a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
  - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
3. The permittee shall collect and record the following information for this emission unit each month:
- a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

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The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
  - c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
  - d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
  - e. the average VOC emissions from the recovered cleanup/purge materials  $[(4.b) \times (4.d)]$  in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as  $[(4.b) \times (4.c) \times (4.d)]$  if the material amount is recorded in gallons.

**IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or

preventative measures which have been, or will be taken, to correct the situation.

## V. Testing Requirements

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

- a. Emission Limitation:  
 14.98 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) +

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(141%, based on possible range of VOC content per individual coating) = 284%;  
Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
5.89 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

## Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

## Applicable Compliance Method:

Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K002 - Narrow web continuous flexographic printing press - 642		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



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Emissions Unit ID: K004

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 22.24 lbs/hour and 8.74 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (see A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2.b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This

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emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and

cleanup material employed as applied;

- c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
- \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.

- 3. The permittee shall collect and record the following information for this emission unit each month:
  - a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

- 4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
  - c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
  - d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and

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- e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

**IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.1.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

**V. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
21.17 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
 8.74 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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Emissions Unit ID: K004

**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>
K004 - Narrow web continuous flexographic printing press - 662		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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Emissions Unit ID: K005

**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>
<p>K005 - Narrow web continuous flexographic printing press - 663</p> <p>MODIFIED</p> <p>The terms and conditions in this permit supersede the terms in PTI 13-03807 issued on 8/1/2006.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 13.25 lbs/hour and 5.21 tons per rolling, 12-month period from all inks, coatings and cleanup materials.</p> <p>See Section A.I.2.c.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).</p>
	<p>OAC rule 3745-21-09(Y)(2)(b)</p>	<p>The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).</p>
	<p>OAC rule 3745-31-05(C) Synthetic Minor for purposes of avoiding non-attainment new source review</p>	<p>See Sections A.I.2. b and A.II.1.</p>

**2. Additional Terms and Conditions**

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- 2.a** The emissions units located at this facility are K001, K002, , K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

- 1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

- 1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and

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- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
  - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
- a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
  - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
3. The permittee shall collect and record the following information for this emission unit each month:
- a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

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4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
  - c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
  - d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
  - e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

#### **IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

**V. Testing Requirements**

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

- a. Emission Limitation:  
 13.25 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

$$\text{Press Allocation} = (\text{Annual Press Hours, based on CY2005/06 data}) / (\text{Total Press Hours for K001-K208, based on CY2005/06 data})$$

$$\text{Annual VOC Emissions By Press} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation})(\text{Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data})$$

$$\text{Short Term VOC Emissions (average lb/hr)} = (\text{Annual VOC Emissions By Press}) / (\text{Annual Mean Press Hours})$$

$$\text{Annual VOC Emissions By Press w/ SF \# 1} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation, based on CY2005/06 data})(\text{Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data})(\text{SF \#1})$$

$$\text{Short Term VOC Emissions w/ SF \# 2} = [(\text{CY2005/06 VOC Emissions by Press}) / (\text{CY2005/06 Mean Press Hours})](\text{SF \# 2})$$

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case

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emissions.

- b. Emission Limitation:  
5.21 tons of VOC per rolling, 12-month period from a combination of inks, coatings and adhesives, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

$$\text{Press Allocation} = (\text{Annual Press Hours, based on CY2005/06 data}) / (\text{Total Press Hours for K001-K208, based on CY2005/06 data})$$

$$\text{Annual VOC Emissions By Press} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation})(\text{Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data})$$

$$\text{Annual VOC Emissions By Press w/ SF \# 1} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation, based on CY2005/06 data})(\text{Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data})(\text{SF \#1})$$

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- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.
- Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.
- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K005 - Narrow web continuous flexographic printing press - 663		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



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Emissions Unit ID: K006

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 26.21 lbs/hour and 10.30 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2.b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and

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cleanup material employed as applied;

- c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
- d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
- e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.

3. The permittee shall collect and record the following information for this emission unit each month:
  - a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;

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- c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
- d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
- e. the average VOC emissions from the recovered cleanup/purge materials  $[(4.b) \times (4.d)]$  in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as  $[(4.b) \times (4.c) \times (4.d)]$  if the material amount is recorded in gallons.

#### IV. Reporting Requirements

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (see Section A.1.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

#### V. Testing Requirements

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
26.21 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
10.32 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press

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Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

## **VI. Miscellaneous Requirements**

None

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K006 - Narrow web continuous flexographic printing press - 665		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



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- 2.a** The emissions units located at this facility are K001, K002, , K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

- 1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

- 1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or

tons; and

- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
  - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
    - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
    - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
    - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
    - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
    - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
    - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
    - \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
  3. The permittee shall collect and record the following information for this emission unit each month:
    - a. the actual monthly press operation hours, in hours per month; and
    - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air

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Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
  - c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
  - d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
  - e. the average VOC emissions from the recovered cleanup/purge materials  $[(4.b) \times (4.d)]$  in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as  $[(4.b) \times (4.c) \times (4.d)]$  if the material amount is recorded in gallons.

**IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (see Section A.I.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

## V. Testing Requirements

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

- a. Emission Limitation:  
 21.87 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%;

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Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
8.59 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

$$\text{Press Allocation} = (\text{Annual Press Hours, based on CY2005/06 data}) / (\text{Total Press Hours for K001-K208, based on CY2005/06 data})$$

$$\text{Annual VOC Emissions By Press} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation})(\text{Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data})$$

$$\text{Annual VOC Emissions By Press w/ SF \# 1} = (\text{Emissions units K001-K208 Material Restriction})(\text{Press Allocation, based on CY2005/06 data})(\text{Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data})(\text{SF \#1})$$

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.  
Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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**Facility ID: 131855806**

Emissions Unit ID: K007

**State Only Enforceable Section**

**B. State Only Enforceable Section**

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

- 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>
K007 - Narrow web continuous flexographic printing press - 668		None

**2. Additional Terms and Conditions**

None

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Emissions Unit ID: K007

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None



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Emissions Unit ID: K008

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 28.43 lbs/hour and 11.17 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2. b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207 and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

## **II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

## **III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;

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- b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
- c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
- d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
- e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.

- 3. The permittee shall collect and record the following information for this emission unit each month:
  - a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

- 4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;

- c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
- d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
- e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

#### **IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.1.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

#### **V. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
28.43 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
11.17 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

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Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

## **VI. Miscellaneous Requirements**

None

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K008 - Narrow web continuous flexographic printing press - 670		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Facility ID: 131855806**

Emissions Unit ID: K009

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 26.36 lbs/hour and 10.36 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2.b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This

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emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and

cleanup material employed as applied;

- c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
- d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
- e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
- f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.

- 3. The permittee shall collect and record the following information for this emission unit each month:
  - a. the actual monthly press operation hours, in hours per month; and
  - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.

- 4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
  - a. the date the materials from the recovery drum or tank were shipped off site;
  - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;
  - c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
  - d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and

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- e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

**IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.1.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

**V. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
26.36 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

**Applicable Compliance Method:**

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Emissions Unit ID: K009

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
10.36 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

None

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**Modif**

**Facility ID: 131855806**

Emissions Unit ID: K009

**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>
K009 - Narrow web continuous flexographic printing press - 671		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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Emissions Unit ID: K010

**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>	new source review
K010 - Narrow web continuous flexographic printing press - 672  MODIFIED  The terms and conditions in this permit supersede the terms in PTI 13-03807 issued on 8/1/2006.	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-21-09(Y)(2)(b)	
	OAC rule 3745-31-05(C) Synthetic Minor for purposes of avoiding non-attainment	

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Emissions Unit ID: K010

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 19.61 lbs/hour and 7.71 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2.b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, , K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**Modification Issued: 4/12/2007****II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:

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- a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
- \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
3. The permittee shall collect and record the following information for this emission unit each month:
    - a. the actual monthly press operation hours, in hours per month; and
    - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.
  4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
    - a. the date the materials from the recovery drum or tank were shipped off site;
    - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;

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- c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
- d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
- e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

#### **IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.1.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

#### **V. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
19.61 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
7.71 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press

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Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

## **VI. Miscellaneous Requirements**

None

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Emissions Unit ID: K010

**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 - Narrow web continuous flexographic printing press - 672		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**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>	
K011 - Narrow web continuous flexographic printing process - 673	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) Synthetic Minor for purposes of avoiding non-attainment new source review
MODIFIED		
The terms and conditions in this permit supersede the terms in PTI 13-03807 issued on 8/1/2006.		
	OAC rule 3745-21-09(Y)(2)(b)	

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Emissions Unit ID: K011

Applicable Emissions  
Limitations/Control Measures

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 26.40 lbs/hour and 10.38 tons per rolling, 12-month period from all inks, coatings and cleanup materials.

See Section A.I.2.c.

The requirements of this rule also include compliance with the requirements of OAC rule(s) 3745-21-09(Y)(2)(b) and 3745-31-05(C).

The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tons per year (tpy).

See Sections A.I.2.b and A.II.1.

**2. Additional Terms and Conditions**

- 2.a** The emissions units located at this facility are K001, K002, , K004, K005, K006, K007, K008, K009, K010, K011, K028, K202, K203, K204, K205, K206, K207, and K208.
- 2.b** The maximum annual combined VOC emissions generated by the printing lines and associated cleanup activities for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028 shall not exceed 98.0 tons per year, based on a rolling, 12-month summation of emissions.
- 2.c** The hourly emission limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop and maintain daily record keeping requirements to ensure compliance with the hourly VOC emission limit.

**II. Operational Restrictions**

1. The maximum annual volatile organic material usage for all emissions units referenced in this permit (emissions units K001, K002, K004-K011, and K028) shall not exceed 98.0 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions and usage, upon issuance of this permit.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a):
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and cleanup material employed as applied;
  - c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(1.b) x (1.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.

\* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
2. The permittee shall collect and record the following information each month for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. the name and identification number of each ink, coating, additive, adhesive, and cleanup material employed;
  - b. the weight, in pounds or tons per month, of each ink, coating, additive, adhesive, and

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- cleanup material employed as applied;
- c. the VOC content of each ink, coating, additive, adhesive, and cleanup material employed, as applied, in percent by weight;
  - d. the total volatile organic material usage and VOC emissions from all ink, additive, adhesive, and cleanup materials employed calculated by summing the records of [(2.b) x (2.c)] for each ink, coating, additive, adhesive, and cleanup material, and subtracting any recovered material\* in pounds or tons per month;
  - e. the rolling, 12-month summation of volatile organic material usage and VOC emissions from all ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons; and
  - f. the rolling, 12-month summation of ink, coating, additive, adhesive, and cleanup material employed, in pounds or tons.
- \* if a credit for recovered cleanup/purge materials is to be used to demonstrate compliance and/or used in calculations for emission reports; records of the total amount (gallons or pounds) of the cleanup/purge material collected and added to the recovery tank/drum (for recycle, recovery, and/or disposal at an outside facility) shall be maintained as required in Section A.III.4.
3. The permittee shall collect and record the following information for this emission unit each month:
    - a. the actual monthly press operation hours, in hours per month; and
    - b. the rolling, 12-month summation of the operational press hours.

The permittee shall use this data to verify, upon request by the Cleveland Division of Air Quality (CDAQ), that the annual press allocation of material usage and emissions is valid.
  4. If a credit for recovered materials is used to demonstrate compliance with all of the flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a and/or emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028) the permittee shall maintain the following records for the recovered cleanup/purge materials and the recovery drum, or tank, serving this emissions unit:
    - a. the date the materials from the recovery drum or tank were shipped off site;
    - b. the amount of cleanup/purge material, in gallons or pounds, from the recovery drum or tank shipped off site;

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- c. the average density of the cleanup/purge material, in pounds per gallon, from the recovery drum or tank (if the amount is recorded in gallons);
- d. the average VOC content for the recovered cleanup/purge material, in percent by weight; and
- e. the average VOC emissions from the recovered cleanup/purge materials [(4.b) x (4.d)] in pounds. Note the average VOC emissions, in pounds, from the recovered cleanup/purge material is calculated as [(4.b) x (4.c) x (4.d)] if the material amount is recorded in gallons.

#### **IV. Reporting Requirements**

1. The permittee shall notify the CDAQ in writing of any monthly record showing that the rolling, 12-month summation of coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) exceeded one hundred forty-eight tons. The notification shall include a copy of such record and shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified.
2. The permittee shall submit deviation (excursion) reports which include the following information for emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011 and K028:
  - a. an identification of each month during which the rolling, 12-month volatile organic material usage and VOC emissions exceed 98.0 tpy based on a rolling, 12-month summation.

The deviation (excursion) report shall be sent to the CDAQ within 30 days following the end of the calendar month during which they were identified and shall include a copy of any such record; an identification of the probable cause for such deviation; and any corrective actions or preventative measures which have been, or will be taken, to correct the situation.

#### **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
26.40 lbs of VOC / hour from a combination of ink, coating, additive, adhesive, and cleanup material.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press Hours for K001-K208, based on CY2005/06 data)

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Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)

Short Term VOC Emissions (average lb/hr) = (Annual VOC Emissions By Press) / (Annual Mean Press Hours)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data) (Average VOC Content of all Materials from emissions units K001-K208 based on CY2005/06 data)(SF #1)

Short Term VOC Emissions w/ SF # 2 = [(CY2005/06 VOC Emissions by Press) / (CY2005/06 Mean Press Hours)](SF # 2)

Safety Factor # 1 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) = 143%; Therefore, SF # 1 = 1.43 was applied to the annual limit to determine worst case emissions.

Safety Factor # 2 considers the error associated with the presumed physical limitations in regards to the allocation of emissions units K001-K208 ink usage by individual press AND the error associated with the VOC content of the coatings applied on a specific press. Propagation of error associated with the physical limitations determined from a historical review of the press allocation = (12%, based on historical fluctuation in operational hours) + (101%, based on the # of possible print stations used during operation) + (30%, based on variation in product coverage over all product lines) + (141%, based on possible range of VOC content per individual coating) = 284%; Therefore, SF # 2 = 2.84 was applied to the short term limit to determine worst case emissions.

- b. Emission Limitation:  
10.38 tons of VOC per rolling, 12-month period from a combination of ink, coating, additive, adhesive, and cleanup material, as a 12-month rolling summation.

Applicable Compliance Method:

This emission limitation is based upon the unit's potential to emit. The potential to emit calculations, as shown in the following equations, were derived using company-specified process data.

Press Allocation = (Annual Press Hours, based on CY2005/06 data) / (Total Press

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Hours for K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press = (Emissions units K001-K208 Material Restriction)(Press Allocation)(Average VOC Content of all Materials from the emissions units K001-K208, based on CY2005/06 data)

Annual VOC Emissions By Press w/ SF # 1 = (Emissions units K001-K208 Material Restriction)(Press Allocation, based on CY2005/06 data)(Average VOC Content of all Materials from emissions units K001-K208, based on CY2005/06 data)(SF #1)

- c. Emission Limitation:  
98.0 tons VOC (for K001-K011 and K028) per rolling, 12-month period from a combination of inks, coatings, additives, adhesives, and cleanup materials.

Applicable Compliance Method:  
Compliance shall be determined based on the record keeping specified in Section A.III.2.

- d. Operational Limitation:  
The total maximum coating and ink usage in all flexographic, packaging rotogravure, and publication rotogravure printing lines located at this facility (See Section A.I.2.a) shall be less than or equal to 148 tpy.

Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section A.III.1.

## **VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K011 - Narrow web continuous flexographic printing process - 673		None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None