

**Synthetic Minor Determination and/or**  **Netting Determination**

Permit To Install **01-01303**

**A. Source Description**

The applicant, Vertis, Inc. (Vertis), has submitted a PTI application for the Chapter 31 modification of eight existing printing presses and the installation of two new printing presses. The eight *existing* printing presses were previously permitted under Synthetic Minor PTI 01-08728 issued August 5, 2003. The existing synthetic minor limitations at the facility are continued in this permit and expanded to the new printing presses. The purpose of both printing presses is to manufacture advertising inserts and other similar printed products.

**B. Facility Emissions and Attainment Status**

Vertis is classified as a synthetic minor facility for volatile organic compounds (VOC), single hazardous air pollutant (HAP), and combined HAPs. Without synthetic minor limitations presented in this permit, potential emissions from the ten printing presses trigger would Title V and Non-Attainment NSR permitting thresholds levels. The facility wide emissions for all emissions units (K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011), *with* synthetic minor limits, is 99.0 tons per year for volatile organic compounds (VOC), 9.9 tons per year for a single hazardous air pollutant (HAP), and 24.9 for multiple HAPs.

**C. Source Emissions**

This permit consists of maintaining the existing synthetic minor restrictions and limitations for emissions units K001, K002, K003, K004, K006, K007, K008, and K009, and incorporating new emissions units K010 and K011. Overall synthetic minor emission limitations from all emission units at the facility will change from 99.0 tons VOC, 9.0 tons HAP and 22.0 tons HAPs, to 99.0 tons VOC, 9.9 tons HAP and 24.9 HAPs per rolling, 12-month summation. Without the existing synthetic minor limitations and continuation of them in this permit, annual potential emissions of volatile organic compounds (VOC) pollutants from the ten printing presses is 429.4 tons per year.

Requested yearly emissions of volatile organic compounds (VOC), as based upon the annual, facility-wide (nine printing presses), restrictions of ink, fountain solution, and blanket wash material usages is 99.0 tons per year.

Limiting the annual, facility-wide, usage of ink, fountain solution material, and blanket wash material along with use of four thermal afterburners each with a minimum destruction efficiency of 95%, will reduce potential emissions of volatile organic compounds to 99.0 tons, single HAP to 9.9 tons and combined HAP emissions to 24.9 tons.

**D. Conclusion**

Vertis will remain a synthetic minor facility by means of limiting the total yearly emissions of both volatile organic compounds and hazardous air pollutant(s). The reduction of yearly emissions will be achieved by limiting the annual ink, fountain solution, and blanket wash material usage along with 95% destruction efficiency for each of the four thermal afterburners. The volatile organic compounds potential emissions of 377.6 tons per year are reduced to 99.0 tons per year. The single and multiple hazardous air pollutant(s) emissions will be maintained at 9.9 tons per year and 24.9 tons per year.

The synthetic minor will effectively restrict the volatile organic compounds and hazardous air pollutant emissions below Title V emissions thresholds. The operational restrictions, record keeping, reporting and testing requirements will ensure that compliance with this permit is achieved and maintained.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
FRANKLIN COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:  
Lazarus Gov.  
Center

**Application No: 01-01303  
Fac ID: 0125041807**

**DATE: 10/4/2005**

Vertis Inc  
Stephen Hultquist  
250 W Pratt St 18th floor  
Baltimore, CA 21201

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2000** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

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

CC: USEPA

CDO

Mid-Ohio Regional Planning Commission

**FRANKLIN COUNTY**

**PUBLIC NOTICE**

**ISSUANCE OF DRAFT PERMIT TO INSTALL 01-01303 FOR AN AIR CONTAMINANT SOURCE FOR  
Vertis Inc**

On 10/4/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Vertis Inc**, located at **4051 Fondorf Drive, Columbus, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 01-01303:

**Goss C700, 4 unit heatset web offset lithographic printing press and associated dryer.**

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Isaac Robinson, Ohio EPA, Central District Office, 3232 Alum Creek Drive, Columbus, OH 43207-3417  
[(614)728-3778]



**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 01-01303**

Application Number: 01-01303  
Facility ID: 0125041807  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Vertis Inc  
Person to Contact: Stephen Hultquist  
Address: 250 W Pratt St 18th floor  
Baltimore, CA 21201

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**4051 Fondorf Drive  
Columbus, Ohio**

Description of proposed emissions unit(s):  
**Goss C700, 4 unit heatset web offset lithographic printing press and associated dryer.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Vertis Inc

Facility ID: 0125041807

PTI Application: 01-01303

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

## **A. Permit to Install General Terms and Conditions**

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

### **3. Records Retention Requirements**

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

### **4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

**Vertis Inc**

**Facility ID: 0125041807**

**PTI Application: 01-01303**

**Issued: To be entered upon final issuance**

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

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

**Vertis Inc****Facility ID: 0125041807****PTI Application: 01-01303****Issued: To be entered upon final issuance****9. Construction of New Sources(s)**

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

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

**10. Public Disclosure**

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

**11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

**12. Best Available Technology**

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

**Vertis Inc**

**Facility ID: 0125041807**

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

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

**Vertis****PTI A**Emissions Unit ID: **K001****Issued: To be entered upon final issuance**

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 emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

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

**15. Fees**

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

**B. Permit to Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	99.0
Combined HAPs	24.9
Individual HAP	9.9

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

**A. 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>
K001 - 8 Unit Harris N954 heatset web offset lithographic printing press (954-1) and dryer controlled by Katec thermal afterburner. The terms of this permit supercede those identified in PTI No. 01-08728 issued August 5, 2003.	OAC rule 3745-31-05(A)(3)  OAC rule 3745-17-11(A)  OAC rule 3745-17-07(A)(1)  OAC rule 3745-31-05(C) (synthetic minor to avoid NSR) OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)  OAC rule 3745-21-07(G)(1)  OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)  OAC rule 3745-21-07(G)(2)

**Vertis  
PTI A**

Emissions Unit ID: **K001**

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<p>OAC rule 3745-21-07(G)(6)(a)</p>	<p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p>	<p>K008, K009, K010, and K011 combined.</p>
	<p>Emissions shall not exceed:</p>	<p>See Section B.1 and 4 below.</p>
	<p>48.0 lbs/hr and 34.7 tons/yr of volatile organic compounds (VOC) from printing operations.</p>	<p>The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).</p>
	<p>0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.</p>	<p>Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.</p>
	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).</p>	<p>The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).</p>
	<p>See Section A.2.a below.</p>	<p>The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).</p>
	<p>Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.</p>	<p>The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).</p>
	<p>See Section B.1, 2 and 4 below.</p>	
	<p>The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007,</p>	

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**2. Additional Terms and Conditions**

**2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner (Katec), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;  
VOC from heatset inks:  $[b \times d \times \text{substrate retention factor } (1.0-0.20) \times (1.0-j)]$

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VOC from coldset inks: [b x d x substrate retention factor (1.00-0.95)]  
 VOC from heatset captured fountain solution: [c x g x cap. eff. (1-0.30) x (1.0-j)]  
 VOC from heatset fugitive fountain solution: [c x g x fug. (1-0.70)]  
 VOC from coldset fountain solution: [c x g]  
 VOC from captured automatic blanket wash: [c x g x cap. eff. (1-0.6) x (1.0-j)]  
 VOC from fugitive automatic blanket wash: [c x g x fug. (1-0.4)]  
 VOC from manual blanket wash: [c x g x retention factor (1.0-0.5)]  
 HAP from heatset inks: [b x e x substrate retention factor (1.0-0.20) x (1.0-j)]  
 HAP from coldset inks: [b x e x substrate retention factor (1.00-0.95)]  
 HAP from heatset captured fountain solution: [c x h x cap. eff. (1-0.30) x (1.0-j)]  
 HAP from heatset fugitive fountain solution: [c x h x fug. (1-0.70)]  
 HAP from coldset fountain solution: [c x h]  
 HAP from captured automatic blanket wash: [c x h x cap. eff. (1-0.6) x (1.0-j)]  
 HAP from fugitive automatic blanket wash: [c x h x fug. (1-0.4)]  
 HAP from manual blanket wash: [c x h x retention factor (1.0-0.5)]  
 HAPs from heatset inks: [b x f x substrate retention factor (1.0-0.20) x (1.0-j)]  
 HAPs from coldset inks: [b x f x substrate retention factor (1.00-0.95)]  
 HAPs from heatset captured fountain solution: [c x i x cap. eff. (1-0.30) x (1.0-j)]  
 HAPs from heatset fugitive fountain solution: [c x i x fug. (1-0.70)]  
 HAPs from coldset fountain solution: [c x i]  
 HAPs from captured automatic blanket wash: [c x i x cap. eff. (1-0.6) x (1.0-j)]  
 HAPs from fugitive automatic blanket wash: [c x i x fug. (1-0.4)]  
 HAPs from manual blanket wash: [c x i x retention factor (1.0-0.5)]

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes ( in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month

**Vertis Inc****PTI Application: 01-01202****Issue****Facility ID: 0125041807****Emissions Unit ID: K001**

VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K001) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

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Pollutant: Napthalene

TLV (mg/m3): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 776.5

MAGLC (ug/m3):1238

Pollutant: Glycol Ether

TLV (mg/m3): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 61.4

MAGLC (ug/m3): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be

**Vertis Inc****PTI Application: 01-01202****Issue:****Facility ID: 0125041807****Emissions Unit ID: K001**

required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

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2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

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

- a. Emission Limitation:  
VOC emissions shall not exceed 48.0 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 600 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 60 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 60 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

Vertis Inc

PTI Application: 01-01202

Issue

Facility ID: 0125041807

Emissions Unit ID: K001

- b. Emission Limitation:  
VOC emissions shall not exceed 34.7 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000

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lbs/ton.

- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

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Issue

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Emissions Unit ID: K001

- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the

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incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

**F. Miscellaneous Requirements**

None

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Emissions Unit ID: **K002**

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K002 - 8-Unit Harris N900 heatset web offset lithographic printing press (908) and dryer controlled by KATEC thermal afterburner. The terms of this permit supercede those identified in PTI No. 01-08728 issued August 5, 2003.	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-17-11(A)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-31-05(C) (synthetic minor to avoid NSR) OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(2)

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OAC rule	Applicable Emissions	
3745-21-07(G)(6)(a)	<u>Limitations/Control Measures</u>	
	Emissions shall not exceed:	See Section B.1 and 4 below.
	48.0 lbs/hr and 34.7 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.	

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**2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner (Katec), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

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4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;
    - VOC from heatset inks:  $[b \times d \times \text{substrate retention factor } (1.0-0.20) \times (1.0-j)]$

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VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$   
 VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$   
 VOC from coldset fountain solution:  $[c \times g]$   
 VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$   
 VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$   
 HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$   
 HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$   
 HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$   
 HAP from coldset fountain solution:  $[c \times h]$   
 HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 HAP from fugitive automatic blanket wash:  $[c \times h \times \text{fug. (1-0.4)}]$   
 HAP from manual blanket wash:  $[c \times h \times \text{retention factor (1.0-0.5)}]$   
 HAPs from heatset inks:  $[b \times f \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$   
 HAPs from coldset inks:  $[b \times f \times \text{substrate retention factor (1.00-0.95)}]$   
 HAPs from heatset captured fountain solution:  $[c \times i \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 HAPs from heatset fugitive fountain solution:  $[c \times i \times \text{fug. (1-0.70)}]$   
 HAPs from coldset fountain solution:  $[c \times i]$   
 HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug. (1-0.4)}]$   
 HAPs from manual blanket wash:  $[c \times i \times \text{retention factor (1.0-0.5)}]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes ( in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month

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VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K002) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Napthalene

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Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5MAGLC (ug/m<sup>3</sup>):1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under

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other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.

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3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

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

- a. Emission Limitation:  
VOC emissions shall not exceed 48.0 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 600 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 60 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 60 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 34.7 tons/yr.

## Applicable Compliance Method:

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Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.

## Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.

## Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.

- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

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Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

f. Emission Limitation:

The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

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- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

## Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the

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incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

**F. Miscellaneous Requirements**

None

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**PART III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. 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>	
K003 - 4-Unit Harris N900 heatset web offset lithographic printing press (904) and dryer controlled by Katec thermal afterburner. The terms of this permit supercede those identified in PTI No. 01-08728 issued August 5, 2003.	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-17-11(A)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-31-05(C) (synthetic minor to avoid NSR) OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(2)

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OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions <u>Limitations/Control Measures</u>	K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
	Emissions shall not exceed:	See Section B.1 and 4 below.
	41.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001,	

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## 2. Additional Terms and Conditions

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

## B. Operational Restrictions

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner (Katec), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

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4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;

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VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$

VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$

VOC from coldset fountain solution:  $[c \times g]$

VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$

VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$

HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$

HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$

HAP from coldset fountain solution:  $[c \times h]$

HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAP from fugitive automatic blanket wash:  $[c \times h \times \text{fug. (1-0.4)}]$

HAP from manual blanket wash:  $[c \times h \times \text{retention factor (1.0-0.5)}]$

HAPs from heatset inks:  $[b \times f \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAPs from coldset inks:  $[b \times f \times \text{substrate retention factor (1.00-0.95)}]$

HAPs from heatset captured fountain solution:  $[c \times i \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAPs from heatset fugitive fountain solution:  $[c \times i \times \text{fug. (1-0.70)}]$

HAPs from coldset fountain solution:  $[c \times i]$

HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug. (1-0.4)}]$

HAPs from manual blanket wash:  $[c \times i \times \text{retention factor (1.0-0.5)}]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and

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combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K003) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level

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Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Naphthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5

MAGLC (ug/m<sup>3</sup>): 1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4

MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under

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OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and

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- e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

## E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
VOC emissions shall not exceed 41.0 lbs/hr.

### Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 300 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by

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multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions (1.0-0.4)\* and dividing by 2000 lbs/ton.

- \* Ohio EPA, Eng. Guide No. 56, June 15, 1999.  
\*\* Stack test data from test performed November 30, 1993.

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.
- Applicable Compliance Method:  
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.
- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-

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month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

h. Emission Limitation:

Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

**F. Miscellaneous Requirements**

None



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OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions <u>Limitations/Control Measures</u>	K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
	Emissions shall not exceed:	See Section B.1 and 4 below.
	41.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001,	

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Emissions Unit ID: **K004****Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner (Katec), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.
4. Emissions from this emissions unit shall be vented to a thermal afterburner with a

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destruction removal efficiency (DRE) of at least 95%.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;  
VOC from heatset inks:  $[b \times d \times \text{substrate retention factor } (1.0-0.20) \times (1.0-j)]$

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VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$   
 VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$   
 VOC from coldset fountain solution:  $[c \times g]$   
 VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$   
 VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$   
 HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$   
 HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$   
 HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$   
 HAP from coldset fountain solution:  $[c \times h]$   
 HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 HAP from fugitive automatic blanket wash:  $[c \times h \times \text{fug. (1-0.4)}]$   
 HAP from manual blanket wash:  $[c \times h \times \text{retention factor (1.0-0.5)}]$   
 HAPs from heatset inks:  $[b \times f \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$   
 HAPs from coldset inks:  $[b \times f \times \text{substrate retention factor (1.00-0.95)}]$   
 HAPs from heatset captured fountain solution:  $[c \times i \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$   
 HAPs from heatset fugitive fountain solution:  $[c \times i \times \text{fug. (1-0.70)}]$   
 HAPs from coldset fountain solution:  $[c \times i]$   
 HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$   
 HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug. (1-0.4)}]$   
 HAPs from manual blanket wash:  $[c \times i \times \text{retention factor (1.0-0.5)}]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

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[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K004) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Napthalene

**Vertis****PTI A**Emissions Unit ID: **K004****Issued: To be entered upon final issuance**TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5MAGLC (ug/m<sup>3</sup>):1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.

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3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

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

- a. Emission Limitation:  
VOC emissions shall not exceed 41.0 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 300 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* Ohio EPA, Eng. Guide No. 56, June 15, 1999.

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\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor  $(1.0-0.20)^*$  by the minimum destruction efficiency  $(1.0-0.95)^{**}$  and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency  $(1-0.30)^*$  by the minimum destruction efficiency  $(1.0-0.95)^{**}$  and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount  $(1-0.70)^*$  and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor  $(1.0-0.50)^*$  and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency  $(1.0-0.6)^*$  by the minimum destruction efficiency  $(1.0-0.95)^{**}$  and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions  $(1.0-0.4)^*$  and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.

**Applicable Compliance Method:**

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in

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OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.
- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.
- Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

Personnel from the Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and

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

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

**F. Miscellaneous Requirements**

None



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OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions <u>Limitations/Control Measures</u>	K008, K009, K010, and K011 combined.
	Emissions shall not exceed:	See Section B.1 and 4 below.
	31.0 lbs/hr and 35.0 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007,	

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**2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;  
VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times$

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(1.0-j)]

VOC from coldset inks: [b x d x substrate retention factor (1.00-0.95)]

VOC from heatset captured fountain solution: [c x g x cap. eff. (1-0.30) x (1.0-j)]

VOC from heatset fugitive fountain solution: [c x g x fug. (1-0.70)]

VOC from coldset fountain solution: [c x g]

VOC from captured automatic blanket wash: [c x g x cap. eff. (1-0.6) x (1.0-j)]

VOC from fugitive automatic blanket wash: [c x g x fug. (1-0.4)]

VOC from manual blanket wash: [c x g x retention factor (1.0-0.5)]

HAP from heatset inks: [b x e x substrate retention factor (1.0-0.20) x (1.0-j)]

HAP from coldset inks: [b x e x substrate retention factor (1.00-0.95)]

HAP from heatset captured fountain solution: [c x h x cap. eff. (1-0.30) x (1.0-j)]

HAP from heatset fugitive fountain solution: [c x h x fug. (1-0.70)]

HAP from coldset fountain solution: [c x h]

HAP from captured automatic blanket wash: [c x h x cap. eff. (1-0.6) x (1.0-j)]

HAP from fugitive automatic blanket wash: [c x h x fug. (1-0.4)]

HAP from manual blanket wash: [c x h x retention factor (1.0-0.5)]

HAPs from heatset inks: [b x f x substrate retention factor (1.0-0.20) x (1.0-j)]

HAPs from coldset inks: [b x f x substrate retention factor (1.00-0.95)]

HAPs from heatset captured fountain solution: [c x i x cap. eff. (1-0.30) x (1.0-j)]

HAPs from heatset fugitive fountain solution: [c x i x fug. (1-0.70)]

HAPs from coldset fountain solution: [c x i]

HAPs from captured automatic blanket wash: [c x i x cap. eff. (1-0.6) x (1.0-j)]

HAPs from fugitive automatic blanket wash: [c x i x fug. (1-0.4)]

HAPs from manual blanket wash: [c x i x retention factor (1.0-0.5)]

- i. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes,

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in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K006) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

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Pollutant: Naphthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5MAGLC (ug/m<sup>3</sup>):1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under

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other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each

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12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.

3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
VOC emissions shall not exceed 31.00 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 300 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 30 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed August 30, 2000.*

- b. Emission Limitation:  
VOC emissions shall not exceed 35.0 tons/yr.

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**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink

usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. **Emission Limitation:**  
PE shall not exceed 0.551 lb/hr.

**Applicable Compliance Method:**

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. **Emission Limitation:**  
PE shall not exceed 2.41 tons per year.

**Applicable Compliance Method:**

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.

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- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.
- Applicable Compliance Method:  
The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
  - ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.

- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

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Office.**

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**F. Miscellaneous Requirements**

None



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Applicable Emissions Limitations/Control Measures | HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Emissions shall not exceed: | See Section B.1 below.

14.5 lbs/hr and 16.0 tons/yr of volatile organic compounds (VOC) from printing operations. | The provisions of OAC rule 3745-21-07(G), shall not apply to this emissions unit pursuant to OAC rule OAC rule 3745-21-07(G)(9)(c). See

The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G), 3745-31-05(C), and 3745-35-07(B). | Section A.2.b below.

See Section A.2.a below.

Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

See Section B.1 and 2 below.

The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all

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**2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, no additional monitoring, record keeping and/or reporting is necessary to ensure compliance with these limits.
- 2.b** The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

Prior to employing any photochemically reactive materials, the permittee shall provide written notification to, and obtain approval from, Ohio EPA, Central District Office. Such notification shall include information sufficient to determine that the emissions associated with the proposed change in materials will comply with the emission limits and/or control requirements as defined in OAC rule 3745-21-07(G)(2). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC

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content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010 and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks,

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fountain solutions and blanket washes, in pounds and tons, using the following equations;

VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$

VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$

VOC from coldset fountain solution:  $[c \times g]$

VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$

VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$

HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$

HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$

HAP from coldset fountain solution:  $[c \times h]$

HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAP from fugitive automatic blanket wash:  $[c \times h \times \text{fug. (1-0.4)}]$

HAP from manual blanket wash:  $[c \times h \times \text{retention factor (1.0-0.5)}]$

HAPs from heatset inks:  $[b \times f \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAPs from coldset inks:  $[b \times f \times \text{substrate retention factor (1.00-0.95)}]$

HAPs from heatset captured fountain solution:  $[c \times i \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAPs from heatset fugitive fountain solution:  $[c \times i \times \text{fug. (1-0.70)}]$

HAPs from coldset fountain solution:  $[c \times i]$

HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug. (1-0.4)}]$

HAPs from manual blanket wash:  $[c \times i \times \text{retention factor (1.0-0.5)}]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and

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combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permit to install for this emissions unit (K007) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Napthalene

TLV (mg/m3): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 776.5

MAGLC (ug/m3):1238

Pollutant: Glycol Ether

TLV (mg/m3): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 61.4

MAGLC (ug/m3): 2881

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the

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"Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

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1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

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

- a. Emission Limitation:  
VOC emissions shall not exceed 14.5 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 200 lbs/hr by the maximum VOC content of 10%, by weight, by the substrate retention factor (1.0-0.95)\*.

The hourly fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20 gal/hr by the maximum VOC content of 0.0 lbs/gal.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

- b. Emission Limitation:  
VOC emissions shall not exceed 22.0 tons/yr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 1,000,000 lbs/yr by the maximum VOC content of 10%, by weight, by the substrate retention factor (1.0-0.95)\* and dividing by 2000 lbs/ton.

The annual fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 10,000 gal/yr by the maximum VOC content of 0.0 lbs/gal and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

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\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

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- c. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- d. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- e. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

**F. Miscellaneous Requirements**

None

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K008 - 4-unit Goss C700 heatset web offset lithographic printing press (701) and dryer controlled by a Tann regenerative thermal afterburner. The terms of this permit supercede those identified in PTI No. 01-08728 issued August 5, 2003.	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-17-11(A)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-31-05(C) (synthetic minor to avoid NSR) OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(1)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	OAC rule 3745-21-07(G)(2)

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OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions <u>Limitations/Control Measures</u>	K008, K009, K010, and K011 combined.
	Emissions shall not exceed:	See Section B.1 and 4 below.
	44.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007,	

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**2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.
4. Emissions from this emissions unit shall be vented to a thermal afterburner with a

destruction removal efficiency (DRE) of at least 95%.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;
    - VOC from heatset inks:  $[b \times d \times \text{substrate retention factor } (1.0-0.20) \times (1.0-j)]$
    - VOC from coldset inks:  $[b \times d \times \text{substrate retention factor } (1.00-0.95)]$

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VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$

VOC from coldset fountain solution:  $[c \times g]$

VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$

VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$

HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$

HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$

HAP from coldset fountain solution:  $[c \times h]$

HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAP from fugitive automatic blanket wash:  $[c \times h \times \text{fug. (1-0.4)}]$

HAP from manual blanket wash:  $[c \times h \times \text{retention factor (1.0-0.5)}]$

HAPs from heatset inks:  $[b \times f \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$

HAPs from coldset inks:  $[b \times f \times \text{substrate retention factor (1.00-0.95)}]$

HAPs from heatset captured fountain solution:  $[c \times i \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$

HAPs from heatset fugitive fountain solution:  $[c \times i \times \text{fug. (1-0.70)}]$

HAPs from coldset fountain solution:  $[c \times i]$

HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$

HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug. (1-0.4)}]$

HAPs from manual blanket wash:  $[c \times i \times \text{retention factor (1.0-0.5)}]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K008) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the

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emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Naphthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5

MAGLC (ug/m<sup>3</sup>): 1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4

MAGLC (ug/m<sup>3</sup>): 2881

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

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

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decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;

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- d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
  3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
VOC emissions shall not exceed 44.0 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 350 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the

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maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the

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maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions (1.0-0.4)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.

- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in

Section C.1 of this permit.

- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

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- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

**F. Miscellaneous Requirements**

None

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
K009 - 4-unit Goss C700 heatset web offset lithographic printing press (702) controlled by Dual Dry II integrated dryer/thermal afterburner. The terms of this permit supercede those identified in PTI No. 01-08728 issued August 5, 2003.	OAC rule 3745-31-05(A)(3)  OAC rule 3745-17-11(A)  OAC rule 3745-17-07(A)(1)  OAC rule 3745-31-05(C) (synthetic minor to avoid NSR) OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)  OAC rule 3745-21-07(G)(1)  OAC rule 3745-21-07(G)(2)  OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)

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OAC rule	Applicable Emissions	
3745-21-07(G)(6)(a)	<u>Limitations/Control Measures</u>	
	Emissions shall not exceed:	See Section B.1 and 4 below.
	44.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.	

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**2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

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<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.
4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;

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- c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
- d. the VOC content of each ink, in percent by weight;
- e. the individual HAP content of each ink, in percent by weight;
- f. the combined HAP content of each ink, in percent by weight;
- g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
- h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
- i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
- j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
- k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;
  - VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$
  - VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$
  - VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$
  - VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$
  - VOC from coldset fountain solution:  $[c \times g]$
  - VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$
  - VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$
  - VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$
  - HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$
  - HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$
  - HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$
  - HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$

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HAP from coldset fountain solution: [c x h]

HAP from captured automatic blanket wash: [c x h x cap. eff. (1-0.6) x (1.0-j)]

HAP from fugitive automatic blanket wash: [c x h x fug. (1-0.4)]

HAP from manual blanket wash: [c x h x retention factor (1.0-0.5)]

HAPs from heatset inks: [b x f x substrate retention factor (1.0-0.20) x (1.0-j)]

HAPs from coldset inks: [b x f x substrate retention factor (1.00-0.95)]

HAPs from heatset captured fountain solution: [c x i x cap. eff. (1-0.30) x (1.0-j)]

HAPs from heatset fugitive fountain solution: [c x i x fug. (1-0.70)]

HAPs from coldset fountain solution: [c x i]

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HAPs from captured automatic blanket wash:  $[c \times i \times \text{cap. eff.} (1-0.6) \times (1.0-j)]$

HAPs from fugitive automatic blanket wash:  $[c \times i \times \text{fug.} (1-0.4)]$

HAPs from manual blanket wash:  $[c \times i \times \text{retention factor} (1.0-0.5)]$

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and

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- b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K009) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Napthalene

TLV (mg/m3): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 776.5

MAGLC (ug/m3):1238

Pollutant: Glycol Ether

TLV (mg/m3): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 61.4

MAGLC (ug/m3): 2881

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

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

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proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required,

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even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and

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monitoring equipment, when the associated emissions unit was in operation.

2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
VOC emissions shall not exceed 44.0 lbs/hr.

**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 350 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by

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the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions (1.0-0.4)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:

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PE shall not exceed 0.551 lb/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.

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## Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.

- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

## Applicable Compliance Method:

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

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- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

A comprehensive written report on the results of the emission test(s) shall be

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

**F. Miscellaneous Requirements**

None



Emissions Unit ID: **K010**

	Applicable Emissions Limitations/Control Measures	
OAC 3745-21-07(G)(6)(a)	rule Emissions shall not exceed:	K008, K009, K010, and K011 combined. See Section B.1 and 4 below.
	44.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.	The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
	0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.
	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	See Section A.2.a below.	The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).
	Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.	The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).
	See Section B.1, 2 and 4 below.	
	The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001, K002, K003, K004, K006, K007,	

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**2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.

4. Emissions from this emissions unit shall be vented to a thermal afterburner with a destruction removal efficiency (DRE) of at least 95%.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - d. the VOC content of each ink, in percent by weight;
  - e. the individual HAP content of each ink, in percent by weight;
  - f. the combined HAP content of each ink, in percent by weight;
  - g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
  - h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
  - j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
  - k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;  
VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times$

(1.0-j)]

VOC from coldset inks: [b x d x substrate retention factor (1.00-0.95)]

VOC from heatset captured fountain solution: [c x g x cap. eff. (1-0.30) x (1.0-j)]

VOC from heatset fugitive fountain solution: [c x g x fug. (1-0.70)]

VOC from coldset fountain solution: [c x g]

VOC from captured automatic blanket wash: [c x g x cap. eff. (1-0.6) x (1.0-j)]

VOC from fugitive automatic blanket wash: [c x g x fug. (1-0.4)]

VOC from manual blanket wash: [c x g x retention factor (1.0-0.5)]

HAP from heatset inks: [b x e x substrate retention factor (1.0-0.20) x (1.0-j)]

HAP from coldset inks: [b x e x substrate retention factor (1.00-0.95)]

HAP from heatset captured fountain solution: [c x h x cap. eff. (1-0.30) x (1.0-j)]

HAP from heatset fugitive fountain solution: [c x h x fug. (1-0.70)]

HAP from coldset fountain solution: [c x h]

HAP from captured automatic blanket wash: [c x h x cap. eff. (1-0.6) x (1.0-j)]

HAP from fugitive automatic blanket wash: [c x h x fug. (1-0.4)]

HAP from manual blanket wash: [c x h x retention factor (1.0-0.5)]

HAPs from heatset inks: [b x f x substrate retention factor (1.0-0.20) x (1.0-j)]

HAPs from coldset inks: [b x f x substrate retention factor (1.00-0.95)]

HAPs from heatset captured fountain solution: [c x i x cap. eff. (1-0.30) x (1.0-j)]

HAPs from heatset fugitive fountain solution: [c x i x fug. (1-0.70)]

HAPs from coldset fountain solution: [c x i]

HAPs from captured automatic blanket wash: [c x i x cap. eff. (1-0.6) x (1.0-j)]

HAPs from fugitive automatic blanket wash: [c x i x fug. (1-0.4)]

HAPs from manual blanket wash: [c x i x retention factor (1.0-0.5)]

- l. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes,

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in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K010) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model).

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

Pollutant: Naphthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5

MAGLC (ug/m<sup>3</sup>): 1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4

MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant

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not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and

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monitoring equipment, when the associated emissions unit was in operation.

2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

## E. Testing Requirements

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

- a. Emission Limitation:  
VOC emissions shall not exceed 44.0 lbs/hr.

### Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 350 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by

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the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

**Applicable Compliance Method:**

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions (1.0-0.4)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

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\*\* Stack test data from test performed November 30, 1993.

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.
- Applicable Compliance Method:  
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.
- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.

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## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

## h. Emission Limitation:

Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.

## Applicable Compliance Method:

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

- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
- ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

Not later than 30 days prior to any proposed test date(s), the permittee shall

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

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

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

**F. Miscellaneous Requirements**

None



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<p>OAC rule 3745-21-07(G)(6)(a)</p>	<p>Applicable Emissions <u>Limitations/Control Measures</u></p>	<p>K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.</p>
	<p>Emissions shall not exceed:</p>	<p>See Section B.1 and 4 below.</p>
	<p>44.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations.</p>	<p>The hourly emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).</p>
	<p>0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations.</p>	<p>Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.</p>
	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-05(C), and 3745-35-07(B).</p>	<p>The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).</p>
	<p>See Section A.2.a below.</p>	
	<p>Total VOC emissions shall not exceed 99.0 tons per year from emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.</p>	<p>The emission limitation and/or control requirements specified in this rule is less stringent than the emission limitations and/or control requirements established pursuant to OAC rule 3745-31-05(C).</p>
	<p>See Section B.1, 2 and 4 below.</p>	<p>The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).</p>
	<p>The combined total hazardous air pollutants (HAP) emissions shall not exceed 9.9 tons per rolling 12-month period for any single HAP and 24.9 tons per rolling 12-month period for all HAPs from all coating and cleanup materials used in units K001,</p>	

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**2. Additional Terms and Conditions**

- 2.a** The hourly VOC emission limitation and the hourly and annual PE emission limitations were established to reflect the potential to emit for this emissions unit after control. The emissions from this emissions unit is controlled with a thermal afterburner. Therefore, no additional monitoring, record keeping and/or reporting other than the parametric monitoring of the thermal afterburner is necessary to ensure compliance with these limits.

**B. Operational Restrictions**

1. The following annual usage limitations shall not be exceeded for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, based upon a rolling, 12-month summation.

<u>Material:</u>	<u>Limitation:</u>
Heatset ink	7,000,000 pounds
Coldset Ink	400,000 pounds
Heatset Fountain Solution	60,000 gallons
Coldset Fountain Solution	10,000 gallons
Automatic Blanket Wash	6,000 gallons
Manual Blanket Wash	8,000 gallons

A table delineating the usage during the first 12 months is not necessary because records have been submitted to the Ohio EPA, Central District Office (CDO) which demonstrate past compliance with these limitations.

2. Emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 shall not use a heat-set ink with a VOC content greater than 43% by weight, a cold-set ink with a VOC content greater than 10% by weight, a fountain solution with a VOC content greater than 1.2 lbs/gal, or a blanket wash (manual or automatic) with a VOC content greater than 5.4 lbs/gal.

Ink means a liquid material applied by a roll printer. Fountain solution means a concentrated additive, diluted with water and applied to a lithographic plate to render the non-image areas unreceptive to ink. Blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

3. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1400 degrees Fahrenheit.
4. Emissions from this emissions unit shall be vented to a thermal afterburner with a

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destruction removal efficiency (DRE) of at least 95%.

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

1. The permittee shall maintain monthly records of the following information:
  - a. the company identification for each ink, fountain solution and blanket wash employed;
  - b. the number of pounds of each heatset ink and coldset ink employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. the number of gallons of each heatset fountain solution, coldset fountain solution, automatic blanket wash and manual blanket wash employed for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;

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- d. the VOC content of each ink, in percent by weight;
- e. the individual HAP content of each ink, in percent by weight;
- f. the combined HAP content of each ink, in percent by weight;
- g. the VOC content of each fountain solution and blanket wash, in pounds per gallon;
- h. the individual HAP content of each fountain solution and blanket wash, in pounds per gallon;
- i. the combined HAP content of each fountain solution and blanket wash, in pounds per gallon;
- j. the thermal afterburner DRE (%), as demonstrated during the most recent DRE test which demonstrated compliance;
- k. the total monthly VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, using the following equations;
  - VOC from heatset inks:  $[b \times d \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$
  - VOC from coldset inks:  $[b \times d \times \text{substrate retention factor (1.00-0.95)}]$
  - VOC from heatset captured fountain solution:  $[c \times g \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$
  - VOC from heatset fugitive fountain solution:  $[c \times g \times \text{fug. (1-0.70)}]$
  - VOC from coldset fountain solution:  $[c \times g]$
  - VOC from captured automatic blanket wash:  $[c \times g \times \text{cap. eff. (1-0.6)} \times (1.0-j)]$
  - VOC from fugitive automatic blanket wash:  $[c \times g \times \text{fug. (1-0.4)}]$
  - VOC from manual blanket wash:  $[c \times g \times \text{retention factor (1.0-0.5)}]$
  - HAP from heatset inks:  $[b \times e \times \text{substrate retention factor (1.0-0.20)} \times (1.0-j)]$
  - HAP from coldset inks:  $[b \times e \times \text{substrate retention factor (1.00-0.95)}]$
  - HAP from heatset captured fountain solution:  $[c \times h \times \text{cap. eff. (1-0.30)} \times (1.0-j)]$
  - HAP from heatset fugitive fountain solution:  $[c \times h \times \text{fug. (1-0.70)}]$
  - HAP from coldset fountain solution:  $[c \times h]$
  - HAP from captured automatic blanket wash:  $[c \times h \times \text{cap. eff. (1-0.6)} \times$

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(1.0-j)]

HAP from fugitive automatic blanket wash: [c x h x fug. (1-0.4)]

HAP from manual blanket wash: [c x h x retention factor (1.0-0.5)]

HAPs from heatset inks: [b x f x substrate retention factor (1.0-0.20) x (1.0-j)]

HAPs from coldset inks: [b x f x substrate retention factor (1.00-0.95)]

HAPs from heatset captured fountain solution: [c x i x cap. eff. (1-0.30) x (1.0-j)]

HAPs from heatset fugitive fountain solution: [c x i x fug. (1-0.70)]

HAPs from coldset fountain solution: [c x i]

HAPs from captured automatic blanket wash: [c x i x cap. eff. (1-0.6) x (1.0-j)]

HAPs from fugitive automatic blanket wash: [c x i x fug. (1-0.4)]

HAPs from manual blanket wash: [c x i x retention factor (1.0-0.5)]

- I. the cumulative rolling, 12-month usage summation of total heatset inks (in pounds), coldset inks (in pounds), heatset fountain solutions (in gallons), coldset fountain solutions (in gallons), automatic blanket washes (in gallons) and manual blanket washes (in gallons), for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined; and
- m. the cumulative rolling, 12-month summation of the VOC, single HAP and combined HAPs emission rate for all inks, fountain solutions and blanket washes, in pounds and tons, determined by summing the previous 12-month VOC, single HAP and combined HAPs emission rates calculated in accordance with k.

[Note: The recorded information must be for the inks, fountain solutions and blanket washes as employed, including any thinning solvents added at the emissions unit.]

2. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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4. The permittee shall collect and record the following information each day:
  - a. all 3-hour blocks of time during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, dropped below 1400 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, all control devices, and all monitoring equipment, when the associated emissions unit was in operation.
5. The permit to install for this emissions unit (K011) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Naphthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 17.79

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 776.5

MAGLC (ug/m<sup>3</sup>): 1238

Pollutant: Glycol Ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.407

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 61.4

MAGLC (ug/m<sup>3</sup>): 2881

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:

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- a. all exceedances of the rolling, 12-month VOC, single HAP and combined HAPs emission limitations for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - b. all exceedances of the rolling, 12-month summation of inks, fountain solutions and blanket washes for emission units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined;
  - c. all exceedances of the VOC content limitations for ink, in percent by weight, fountain solution and blanket wash, in pounds per gallon;
  - d. all 3-hour blocks of times during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above; and
  - e. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
  3. These quarterly deviation (excursion) reports shall be submitted to the Ohio EPA Central District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a report which states that no deviations occurred during the calendar quarter.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
VOC emissions shall not exceed 44.0 lbs/hr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 350 lbs/hr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* and by the minimum

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destruction efficiency (1.0-0.95)\*\*.

The hourly captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* and by the minimum destruction efficiency (1.0-0.95)\*\*. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 35 gal/hr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\*.

The hourly manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 5 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the shop towels retention factor (1.0-0.50)\*.

The hourly captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* and by the minimum destruction efficiency (1.0-0.95). The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 3 gal/hr by the maximum VOC content of 5.4 lbs/gal and by the fugitive emissions (1.0-0.4)\*.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- b. Emission Limitation:  
VOC emissions shall not exceed 51.5 tons/yr.

## Applicable Compliance Method:

Compliance shall be demonstrated by summing the ink, fountain solution and blanket wash emissions. The ink emissions shall be determined by multiplying the maximum ink usage of 2,000,000 lbs/yr by the maximum VOC content of 43% by weight, by the substrate retention factor (1.0-0.20)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton.

The annual captured fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the capture efficiency (1-0.30)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive fountain solution emissions shall be determined by multiplying the maximum fountain solution usage of 20,000 gal/yr by the maximum VOC content of 1.2 lbs/gal by the fugitive amount (1-0.70)\* and dividing by 2000 lbs/ton.

The annual manual blanket wash emissions shall be determined by multiplying the maximum manual blanket wash usage of 10,000 gal/yr by the maximum VOC

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content of 5.4 lbs/gal by the shop towels retention factor (1.0-0.50)\* and dividing by 2000 lbs/ton.

The annual captured automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the capture efficiency (1.0-0.6)\* by the minimum destruction efficiency (1.0-0.95)\*\* and dividing by 2000 lbs/ton. The fugitive automatic blanket wash emissions shall be determined by multiplying the maximum automatic blanket wash usage of 10,000 gal/yr by the maximum VOC content of 5.4 lbs/gal by the fugitive emissions (1.0-0.4)\* and dividing by 2000 lbs/ton.

\* *Ohio EPA, Eng. Guide No. 56, June 15, 1999.*

\*\* *Stack test data from test performed November 30, 1993.*

- c. Emission Limitation:  
PE shall not exceed 0.551 lb/hr.

**Applicable Compliance Method:**

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 thru 4, 5 and/or 201 and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. Emission Limitation:  
PE shall not exceed 2.41 tons per year.

**Applicable Compliance Method:**

Compliance shall be demonstrated by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton.

- e. Emission Limitation:  
Total VOC emissions from the facility shall not exceed 99.0 tons per year for emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined, as a rolling, 12-month summation.

**Applicable Compliance Method:**

Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.

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- f. Emission Limitation:  
The individual HAP emissions shall not exceed 9.9 tons per rolling 12-month period for all single HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- g. Emission Limitation:  
The combined total HAPs emissions shall not exceed 24.9 tons per rolling 12-month period for all HAP from all coatings and cleanup materials used in units K001, K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1 of this permit.
- h. Emission Limitation:  
Emissions from this emissions unit shall be vented to a thermal afterburner with a DRE of at least 95%.
- Applicable Compliance Method:  
The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- i. The emission testing shall be conducted within 90 days following issuance of this permit. Emission testing conducted 6 months prior to issuance of this permit may satisfy this requirement.
  - ii. The emission testing shall be conducted to demonstrate with the DRE of at least 95%.
  - iii. The following test methods shall be employed to demonstrate compliance with the allowable DRE: 40 CFR Part 60, Appendix A, Methods 1 through 4, and 25 or 25A, as appropriate.

The control or destruction efficiency defined as the percent reduction of mass emissions between the inlet and outlet of the control system shall be determined in accordance with the test methods and procedures specified in Ohio Administrative Code 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of

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the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Central District Office.

- iv. The test(s) shall be conducted while the emissions units venting to the incinerator are operating at or near their maximum capacity and venting emissions to the control device, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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

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

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

**F. Miscellaneous Requirements**

None