State of Ohio Environmental Protection Agency

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

Street Address:
122 S. Front Street

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

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

Application No: 01-01303
Fac ID: 0125041807
DATE: 11/22/2005

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

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

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

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

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

Sincerely,

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

CC: **USEPA** **CDO**

OhioEPA

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 11/22/2005**
Terms and Conditions	**Effective Date: 11/22/2005**

FINAL PERMIT TO INSTALL 01-01303

Application Number:	01-01303
Facility ID:	0125041807
Permit Fee:	**$2000**
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):
Two (2)Goss C700, 4 unit heatset web offset lithographic printing presses and associated dryers and a Tann regenerative thermal afterburner to control emissions from units K008, K010, K011.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

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

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may 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 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

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

Pollutant	Tons Per Year
VOC	99.0
Combined HAPs	24.9
Individual HAP	9.9

Emissions Unit ID: **K001**

PART II - 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
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 3745-21-07(G)(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)(2)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

	Applicable Emissions Limitations/Control Measures	
		K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
OAC rule 3745-21-07(G)(6)(a)	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.	
	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,	

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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 (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):

   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 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.

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, June15, 1999.*
** *Stack test data from test preformed November 30, 1993.*

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

Emissions Unit ID: **K001**

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, June15, 1999.*
** *Stack test data from test preformed 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:
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 through 4 and 25 or 25A, as appropriate.

F. Miscellaneous Requirements

None

Emissions Unit ID: **K002**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
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 3745-21-07(G)(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)(2)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions Limitations/Control Measures	K002, K003, K004, K006, K007, K008, K009, K010, and K011 combined.
	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.	
	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,	

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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 (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
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 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.

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, June15, 1999.*
** *Stack test data from test preformed November 30, 1993.*

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, June15, 1999.*
** *Stack test data from test preformed 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:
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 through 4 and 25 or 25A, as appropriate.

F. Miscellaneous Requirements

None

Emissions Unit ID: **K003**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K003 - 4-Unit Harris N900 heatset web offset lithographic printing press (904) and dyer 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 3745-21-07(G)(2)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions Limitations/Control Measures	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,	

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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 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 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

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.

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, June15, 1999.*
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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:
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 through 4 and 25 or 25A, as appropriate.

F. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K004 - 4-Unit Harris N900 heatset web offset lithographic printing press (900 III) 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 3745-21-07(G)(2)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-21-07(G)(6)(a)	Emissions shall not exceed: 41.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations. 0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations. 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). 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, 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. See Section B.1 and 4 below. 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). Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average. 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). 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). The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).

Emissions Unit ID: **K004**

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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 (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
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 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.

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 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, June15, 1999.
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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:
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 through 4 and 25 or 25A, as appropriate.

F. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K006 - 4-unit Harris N954 heatset web offset lithogrphic printing press (954-2) controlled by Dual Dry 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)	

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-21-07(G)(6)(a)	Emissions shall not exceed: 31.0 lbs/hr and 35.0 tons/yr of volatile organic compounds (VOC) from printing operations. 0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations. 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). 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, 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. See Section B.1 and 4 below.	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). Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average. 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). 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). The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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):

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 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.

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 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, June15, 1999.*
** *Stack test data from test preformed August 30, 2000.*

b. Emission Limitation:
VOC emissions shall not exceed 35.0 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 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, June15, 1999.*
** *Stack test data from test preformed 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 180 days following issuance of this permit.

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 Office.

F. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K007 - 12-unit Harris NC400 coldset web offset lithographic printing press. 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 3745-21-07(G)
	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 3745-35-07(B) (synthetic minor to avoid Title V)	

Applicable Emissions Limitations/Control Measures	
Emissions shall not exceed:	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.
14.5 lbs/hr and 16.0 tons/yr of volatile organic compounds (VOC) from printing operations.	See Section B.1 below.
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).	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 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	

2. Additional Terms and Conditions

2.a The hourly VOC emission limitation was 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.

Material:	Limitation:
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.

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 x d x substrate retention factor (1.0-0.20) x (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, 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 "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

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.

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 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, June15, 1999.*

   b. Emission Limitation:
   VOC emissions shall not exceed 16 .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.

* *Ohio EPA, Eng. Guide No. 56, June15, 1999.*

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

Emissions Unit ID: **K008**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
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 3745-21-07(G)(2)
	OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)	

OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions Limitations/Control Measures	K002, K003, K004, K006, K007, 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.	
	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,	

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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

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 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

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.

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 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, June15, 1999.*
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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 of completion of construction of the Tann regenerative thermal afterburner.

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 Office.

F. Miscellaneous Requirements

None

Emissions Unit ID: **K009**

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
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)	

OAC rule 3745-21-07(G)(6)(a)	Applicable Emissions Limitations/Control Measures	K002, K003, K004, K006, K007, 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.	
	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,	

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.

Material:	Limitation:
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;

   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 x d x substrate retention factor (1.0-0.20) x (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,

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 (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 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

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.

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

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, June15, 1999.*
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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 of completion of construction of this emissions unit.

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 Office.

F. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K010 - 4-unit Goss C700 heatset web offset lithographic printing press and associated dryer controlled by a Tann regenerative thermal afterburner.	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)	

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-21-07(G)(6)(a)	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.	

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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).

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 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

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.

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 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, June15, 1999.*
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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 of completion of construction of this emissions unit.

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 Office.

F. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
K011 - 4- unit Goss C700 heastset web offset lithographic printing press and associated dryer controlled by a Tann regenerative thermal afterburner.	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)	

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-21-07(G)(6)(a)	Emissions shall not exceed: 44.0 lbs/hr and 51.5 tons/yr of volatile organic compounds (VOC) from printing operations. 0.551 lb/hr and 2.41 tons/yr particulate emissions (PE) from printing operations. 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). 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, 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. See Section B.1 and 4 below. 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). Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average. 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). 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). The limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C).

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.

Material:	Limitation:
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 x d x substrate retention factor (1.0-0.20) x (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, 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 (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: 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 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.

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 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, June15, 1999.*
** *Stack test data from test preformed 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, June15, 1999.*
** *Stack test data from test preformed 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 of completion of construction of this emissions unit.

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 Office.

F. Miscellaneous Requirements

None