



State of Ohio Environmental Protection Agency

STREET ADDRESS:

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MAILING ADDRESS:

P.O. Box 1049  
Columbus, OH 43216-1049

12/8/2008

Certified Mail

DINA KUNZLER  
RR DONNELLEY NEWARK RMS  
190 MILLIKEN DR SE  
HEBRON, OH 43025

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR
No	CEMS
No	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 0145020179  
Permit Number: P0103646  
Permit Type: OAC Chapter 3745-31 Modification  
County: Licking

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Advocate. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control Web page <http://www.epa.state.oh.us/dapc> in Microsoft Word and Adobe Acrobat format. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
122 South Front Street  
Columbus, Ohio 43215

and Ohio EPA DAPC, Central District Office  
50 West Town Street, 6th Floor  
P.O. Box 1049  
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install and operate will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install and Operate is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*  
Ohio EPA-CDO

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director



PUBLIC NOTICE  
Issuance of Draft Air Pollution Permit-To-Install and Operate  
RR DONNELLEY NEWARK RMS

Issue Date: 12/8/2008  
Permit Number: P0103646  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Description: Increase in allowable VOC emissions from press K024 with no increase in total facility-wide VOC emissions from presses K013, K015, K018, K019, K020, K021, K022, and K024. .  
Facility ID: 0145020179  
Facility Location: RR DONNELLEY NEWARK RMS  
190 MILLIKEN DR,  
HEBRON, OH 43025  
Facility Description: All Other Publishers

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control, federally enforceable permit-to-install and operate (PTIO) for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Luther Mountjoy at Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049 or (614)728-3778. The permit can be downloaded from the Web page: [www.epa.state.oh.us/dapc](http://www.epa.state.oh.us/dapc)





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

RR Donnelly was permitted to operate 18 heat set web presses as a synthetic minor facility under PTIs 01-08041 and 01-08161 issued on May 3, 2000. Ohio EPA received a PTI application requesting a modification on the facility-wide emission limitations to include a restriction on HAP emissions and reallocation of VOC emissions following removal of 10 presses.

3. Facility Emissions and Attainment Status:

The annual VOC emission rates were derived by mass balance from ink and solvent usage rates and retention factors in the paper web using methodology in Enviroprint. The hourly VOC emission rates were derived at a maximum annual operating rate of 5,000 hours divided into the maximum annual emission rate for each emissions unit as presented in the table below. Combustion emission limitations were derived from AP-42 emission factors for natural gas combustion with burner ratings of from between 1.925 to 2.25 MMBTU/hr assuming 8,760 hours of operation.

EI ID	VOC lb/yr	VOC lb/hr	NOx lb/hr	CO lb/hr	PE lb/hr	VOC t/yr	NOx t/yr	CO t/yr	PE t/yr
K013	19,535	3.9	0.21	0.18	0.02	9.8	0.9	0.78	0.09
K015	22,144	4.4	0.21	0.18	0.02	11.1	0.9	0.78	0.09
K018	24,974	5.0	0.18	0.16	0.01	12.5	0.78	0.7	0.04
K019	20,590	4.1	0.18	0.16	0.01	10.3	0.78	0.7	0.04
K020	21,784	4.36	0.18	0.16	0.01	10.9	0.78	0.7	0.04
K021	22,144	4.4	0.18	0.15	0.01	11.1	0.78	0.66	0.04
K022	21,784	4.36	0.18	0.15	0.01	10.9	0.78	0.66	0.04
K024	42,218	8.44	0.18	0.15	0.01	21.1	0.78	0.66	0.04
	195,173 lb	39.0 lb/hr	1.5 lb/hr	1.3 lb/hr	0.1 lb/hr	97.7 t/yr	6.48t/yr	5.64 t/yr	0.42 t/yr

4. Source Emissions:

Example mass balance calculations assumes 20% retention for ink and 50 % for manual solvent wash (rags) for K024 given annual usage of 87,000 lbs ink at 45% VOC content, 1,100 gallons of manual wash at 6.7 lbs VOC/gallon, 500 gallons of isopropanol at 6.55 lbs VOC/gallon and 2,200 gallons of fountain solution concentrate at 1.79 lbs VOC/gallon

VOC compound	VOC content	Capture	Retention	Ann. Usage	Ann. Emission	Hr Emission
Ink	45%/wt	100%	20%	87,000 lb	31,320 lbs	6.26 lb (stack)
Manual sol wash	6.7 lb/gallon	0	50%	1,100 gallon	3,685 lbs	0.737 lb (fug)
Isopropanol	6.55 lb/gallon	0	0	500 gallon	3,275 lbs	0.655 lb (fug)
Fountain Solution	1.79 lb/gallon	70%	0	2,200 gallon	3,938 lbs	0.55 lb (stack)
					42,218 lbs	0.236 lb (fug)



State of Ohio Environmental Protection Agency  
 Division of Air Pollution Control

**Permit Strategy Write-Up**  
**Permit Number:** P0103646  
**Facility ID:** 0145020179

						6.81 lb (stack)
						1.63 lb (fug)

5. Conclusion:

Although the permits include modeling to determined compliance with the Ohio EPA toxics policy, isopropanol, petroleum naphtha (Stoddard solvent) and propylene glycol (butoxyethanol) are not listed as HAPS under the Clean Air Act. The permit adds annual limitations on HAP emissions with the corresponding monthly recordkeeping to ensure that HAP emissions do not exceed the Title V threshold. The permit limitations represent no increase in VOC emissions, but a slight increase in potential emissions of 0.3 ton NOx and 0.6 ton CO with a decrease of 0.2 ton particulate emission from combustion gases emitted from the dryers

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC (facility-wide)	99.0
NOx	6.5
CO	5.6
PE	0.4
Individual HAP (facility-wide)	9.9
Total HAP (facility-wide)	24.9



**State of Ohio Environmental Protection Agency  
Division of Air Pollution Control**

**DRAFT**

**Air Pollution Permit-to-Install and Operate  
for  
RR DONNELLEY NEWARK RMS**

Facility ID: 0145020179  
Permit Number: P0103646  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 12/8/2008  
Effective: To be entered upon final issuance  
Expiration: To be entered upon final issuance





**Air Pollution Permit-to-Install and Operate**  
for  
RR DONNELLEY NEWARK RMS

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

## Authorization

Facility ID: 0145020179

Application Number(s): A0035543

Permit Number: P0103646

Permit Description: Increase in allowable VOC emissions from press K024 with no increase in total facility-wide VOC emissions from presses K013, K015, K018, K019, K020, K021, K022, and K024. .

Permit Type: OAC Chapter 3745-31 Modification

Permit Fee: \$800.00 *DO NOT send payment at this time - subject to change before final issuance*

Issue Date: 12/8/2008

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

RR DONNELLEY NEWARK RMS  
190 MILLIKEN DR  
HEBRON, OH 43025

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office  
50 West Town Street, 6th Floor  
P.O. Box 1049  
Columbus, OH 43216-1049  
(614)728-3778

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section 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 described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: P0103646  
Permit Description: Increase in allowable VOC emissions from press K024 with no increase in total facility-wide VOC emissions from presses K013, K015, K018, K019, K020, K021, K022, and K024. .

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

- Emissions Unit ID: K013**  
Company Equipment ID: Heatset Printing Press N13  
Superseded Permit Number: 01-08041  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K015**  
Company Equipment ID: Heatset Printing Press N15  
Superseded Permit Number: 01-08161  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K018**  
Company Equipment ID: Heatset Printing Press N18  
Superseded Permit Number: 01-08161  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K019**  
Company Equipment ID: Heatset Printing Press N19  
Superseded Permit Number: 01-08041  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K020**  
Company Equipment ID: Heatset Printing Press N20  
Superseded Permit Number: 01-08041  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K021**  
Company Equipment ID: Heatset Printing Press N21  
Superseded Permit Number: 01-08161  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K022**  
Company Equipment ID: Heatset Printing Press N22  
Superseded Permit Number: 01-08161  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: K024**  
Company Equipment ID: Heatset Printing Press N24  
Superseded Permit Number: 01-08161  
General Permit Category and Type: Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

## **A. Standard Terms and Conditions**



**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Central District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

## **B. Facility-Wide Terms and Conditions**



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0103646

**Facility ID:** 0145020179

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

## **C. Emissions Unit Terms and Conditions**



**1. K013, Heatset Printing Press N13**

**Operations, Property and/or Equipment Description:**

Nine unit heatset web offset lithographic printing press with natural gas dryer (N13)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 1.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 1.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08041 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 3.9 pounds per hour and 9.8 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.21 pound per hour and 0.9 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 3.9 lbs VOC/hr, 0.21 lb NOx/hr, 0.18 lb CO/hr and 0.02 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above).

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K019, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The ΔToxic Air Contaminant Statute<sup>Δ</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ΔReview of New Sources of Air Toxic Emissions, Option A<sup>Δ</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., AX@ hours per day and AY@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m3): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 23,405

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m3): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 423

MAGLC (ug/m3): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m3): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 3.9 pounds per hour and 9.8 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:



Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.21 pound per hour and 0.9 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**2. K015, Heatset Printing Press N15**

**Operations, Property and/or Equipment Description:**

Twelve unit heatset web offset lithographic printing press with natural gas dryer (N15)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 2.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 2.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08041 and 01-08161 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 4.4 pounds per hour and 11.1 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.18 pound per hour and 0.9 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.21 pound per hour and 0.9 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 4.4 lbs VOC/hr, 0.21 lb NO<sub>x</sub>/hr, 0.18 lb CO/hr and 0.02 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K019, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for



Chemical Substances and Physical Agents Biological Exposure Indices;  
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., X hours per day and Y days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m3): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 23,405

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m3): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 423

MAGLC (ug/m3): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m3): 525,000

Maximum Hourly Emission Rate (lbs/hr): 26



Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

f) 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:

Volatile organic compound emissions shall not exceed 4.4 pounds per hour and 11.1 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.21 pound per hour and 0.9 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.02 pound per hour and 0.09 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (2.25 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**3. K018, Heatset Printing Press N18**

**Operations, Property and/or Equipment Description:**

Twelve unit heatset web offset lithographic printing press with natural gas dryer, modification to existing unit (N18)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 3.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 3.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08041 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 5.0 pounds per hour and 12.5 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		requirements of OAC rule 3745-21-07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 3.9 lbs VOC/hr, 0.18 lb NOx/hr, 0.16 lb CO/hr and 0.01 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;



- d. the individual HAP content of each coating and cleanup material employed;
- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K015, K018, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The ΔToxic Air Contaminant Statute<sup>Δ</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ΔReview of New Sources of Air Toxic Emissions, Option A<sup>Δ</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., AX@ hours per day and AY@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m3): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 23,405

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m3): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 423

MAGLC (ug/m3): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m3): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 5.0 pounds per hour and 12.5 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.

Applicable Compliance Method:



Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**4. K019, Heatset Printing Press N19**

**Operations, Property and/or Equipment Description:**

Twelve unit heatset web offset lithographic printing press with natural gas dryer

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. See 4.d)(2) to (5) and e)2.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. See 4.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08041 issued May 3, 2000)	Volatile organic compound emissions shall not exceed 4.1 pounds per hour and 10.3 tons per year.  Carbon monoxide emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.  Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.  Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.  See (2)a and c)(1) below.  The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 4.1 lbs VOC/hr, 0.18 lb NOx/hr, 0.16 lb CO/hr and 0.01 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons:
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A<sup>®</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta X \Delta$  hours per day and  $\Delta Y \Delta$  days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or  $\Delta$ worst case $\Delta$  toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m<sup>3</sup>): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4,152

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

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m<sup>3</sup>): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 423

MAGLC (ug/m<sup>3</sup>): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m<sup>3</sup>): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 4.1 pounds per hour and 10.3 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.18 pound per hour and 0.7 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**5. K020, Heatset Printing Press N20**

**Operations, Property and/or Equipment Description:**

Twelve unit heatset web offset lithographic printing press with natural gas dryer

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. See 5.d)(2) to (5) and e)2.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. See 5.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08041 issued May 3, 2000)	Volatile organic compound emissions shall not exceed 4.36 pounds per hour and 10.9 tons per year.  Carbon monoxide emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.  Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.  Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.  See (2)a and c)(1) below.  The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 4.36 lbs VOC/hr, 0.18 lb NOx/hr, 0.16 lb CO/hr and 0.01 lb PE/hr limitations limitation for this emissions unit was established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K019, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The ΔToxic Air Contaminant Statute<sup>Δ</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ΔReview of New Sources of Air Toxic Emissions, Option A<sup>Δ</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta X \Delta$  hours per day and  $\Delta Y \Delta$  days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or  $\Delta$ worst case $\Delta$  toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m<sup>3</sup>): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4,152

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

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m<sup>3</sup>): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 423

MAGLC (ug/m<sup>3</sup>): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m<sup>3</sup>): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 4.36 pounds per hour and 10.9 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions (22,784 lbs) by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.94 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**6. K021, Heatset Printing Press N21**

**Operations, Property and/or Equipment Description:**

Ten unit heatset web offset lithographic printing press with natural gas dryer (N21)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 6.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 6.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08161 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 4.43 pounds per hour and 11.1 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 3.9 lbs VOC/hr, 0.18 lb NOx/hr, 0.15 lb CO/hr and 0.01 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K019, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The ΔToxic Air Contaminant Statute<sup>Δ</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ΔReview of New Sources of Air Toxic Emissions, Option A<sup>Δ</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta X \Delta$  hours per day and  $\Delta Y \Delta$  days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or  $\Delta$ worst case $\Delta$  toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m<sup>3</sup>): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4,152

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

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m<sup>3</sup>): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 423

MAGLC (ug/m<sup>3</sup>): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m<sup>3</sup>): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)g; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 4.43 pounds per hour and 11.1 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 9,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**7. K022, Heatset Printing Press N22**

**Operations, Property and/or Equipment Description:**

Ten unit heatset web offset lithographic printing press with natural gas dryer (N22)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 7.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 7.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08161 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 4.36 pounds per hour and 10.9 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 4.4 lbs VOC/hr, 0.18 lb NOx/hr, 0.15 lb CO/hr and 0.01 lb PE/hr limitations limitation for this emissions unit was established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K015, K018, K021, K023, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute<sup>o</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A<sup>o</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta X \Delta$  hours per day and  $\Delta Y \Delta$  days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or  $\Delta$ worst case $\Delta$  toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m<sup>3</sup>): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4,152

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

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m<sup>3</sup>): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 423

MAGLC (ug/m<sup>3</sup>): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m<sup>3</sup>): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)j; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 4.36 pounds per hour and 10.9 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.



**8. K024, Heatset Printing Press N24**

**Operations, Property and/or Equipment Description:**

Ten unit heatset web offset lithographic printing press with natural gas dryer (N24)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. See 8.d)(2) to (5) and e)2.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See 8.b)(1)c, b)(2)c, c)(1), d)(1), e)(1), f)(1)e & f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (modification of PTI 01-08161 issued May 3, 2000)	<p>Volatile organic compound emissions shall not exceed 8.44 pounds per hour and 21.1 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.</p> <p>Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.</p> <p>Particulate matter emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>See (2)a and c)(1) below.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		07(G)(9) and OAC rule 3745-31-05-(D)
b.	OAC rule 3745-21-07 (G)(9)	See (2)b below.
c.	OAC rule 3745-31-05(D) (synthetic minor to avoid Title V)	See (2)c, below.

(2) Additional Terms and Conditions

- a. The 8.44 lbs VOC/hr, 0.18 lb NOx/hr, 0.15 lb CO/hr and 0.01 lb PE/hr limitations for this emissions unit were established to reflect the maximum hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- b. This facility shall employ only non-photochemically reactive materials as defined by Ohio Administrative Code (OAC) 3745-21-01 (C)(5).
- c. Facility-wide emissions shall not exceed 99.0 tons of VOC, 9.9 tons of individual HAP emissions and 24.9 tons of total combined HAP emissions per rolling, 12-month period.

Facility-wide emissions shall be determined from a summation of monthly emissions from K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05).

Therefore, the provisions for Title V permitting will not be applicable.

<sup>1</sup>A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual VOC and HAP emissions for emissions units K013 K015, K018, K019, K020, K021, K022 and K024 and all emissions units that are exempt or permit by rule (OAC rule 3745-31-03), and de minimis (OAC rule 3745-15-05):
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the VOC content of each coating and cleanup material employed, in pounds per gallon;
  - d. the individual HAP content of each coating and cleanup material employed;



- e. the combined HAP content of each coating and cleanup material employed;
- f. calculation of the total monthly VOC emission rate for all coatings and cleanup materials for each emissions unit in pounds and tons;
- g. calculation of the cumulative rolling, 12-month summation of the VOC emission rate for all coatings and cleanup materials for each emissions unit and for all emissions units in pounds and tons;
- h. calculation of the individual monthly HAP emission rate for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures from items (1.b) and (1.d));
- i. calculation of the total combined HAP emissions for all HAPs for all coatings and cleanup materials employed, in pounds or tons per month (i.e., the sum of the products of the figures (1.b) and (1.e));
- j. calculation of the cumulative rolling, 12-month summation of the individual HAP emission rate (summation of item (1.h) for the current month plus the previous 11-month emission rates, above); and
- k. calculation of the cumulative rolling, 12-month summation of the combined HAP emission rate (summation of item (1.i) for the current month plus the previous 11-month emission rate, above)..

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

- (2) The PTI application for this/these emissions unit(s), K013, K015, K018, K019, K020, K021, K022, K024, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The ΔToxic Air Contaminant Statute<sup>Δ</sup>, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ΔReview of New Sources of Air Toxic Emissions, Option A<sup>Δ</sup>, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\Delta$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta X \Delta$  hours per day and  $\Delta Y \Delta$  days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or  $\Delta$ worst case $\Delta$  toxic contaminant(s):

Toxic Contaminant: Isopropyl Alcohol

TLV (mg/m<sup>3</sup>): 983,000

Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4,152

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

Toxic Contaminant: 2-Butoxyethanol

TLV (mg/m<sup>3</sup>): 121,000

Maximum Hourly Emission Rate (lbs/hr): 2.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 423

MAGLC (ug/m<sup>3</sup>): 2,889

Toxic Contaminant: Stoddard Solvent

TLV (mg/m<sup>3</sup>): 525,000



Maximum Hourly Emission Rate (lbs/hr): 26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4,152

MAGLC (ug/m3): 12,500

The permittee, has demonstrated that emissions of xylene, from emissions unit K003, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute 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 a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. the probable cause of each deviation (excursion);
    - ii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - iii. the magnitude and duration of each deviation (excursion).
  - b. any month during which the rolling, 12-month VOC emission limitation listed in b)(2)c is exceeded as identified by recordkeeping in d)(1)j; and
  - c. any month during which the rolling 12-month individual HAP and total HAP emission limitations listed in term b)(2)c are exceeded as identified by recordkeeping in d)(1)j and d)(1)k.



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- a. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>®</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration in the annual PER. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70.

f) 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:

Volatile organic compound emissions shall not exceed 8.44 pounds per hour and 21.1 tons per year.

Applicable Compliance Method:

Compliance with the long term emission rate was derived by dividing the maximum annual press VOC emissions (22,144 lbs) by 2,000 lbs per ton. (ENVIROPRINT Ohio, 1995). Compliance shall be demonstrated by record keeping in d)(1)g, above.

Compliance with the short term emission rate shall be demonstrated by dividing the maximum annual press VOC emissions by the actual hours of operation.

- b. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.15 pound per hour and 0.66 ton per year.



Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 84 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.18 pound per hour and 0.78 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 100 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

d. Emission Limitation:

Particulate matter emissions shall not exceed 0.02 pound per hour and 0.04 ton per year.

Applicable Compliance Method:

Compliance with the short term emission limitation shall be determined by multiplying the maximum rated capacity of the emissions unit (1.925 mmBTU/hour) by the emission factor of 7.6 pounds/mmscf (SCC 10300603) and dividing by the conversion factor of 1,050 BTU/scf.

Compliance with the long term emission limitation shall be determined by multiplying the short term maximum emission rate (pounds/hour) by 8,760 hours/year and dividing by 2,000 pounds/ton.

e. Emissions Limitation:

Facility-wide emissions shall not exceed 99.0 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)g, above.



f. Emissions Limitation

Facility-wide emissions shall not exceed 9.9 of an individual HAP and 24.9 tons total combined HAPs per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method

Compliance shall be demonstrated by record keeping in d)(1)j and d)(1)k, above.

g) Miscellaneous Requirements

(1) None.