



State of Ohio Environmental Protection Agency

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Columbus, OH 43216-1049

11/16/2009

Certified Mail

Kevin Rooth  
GRAPHIC PACKAGING INTERNATIONAL, INC  
6385 Cochran Road  
Solon, OH 44139

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

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 1318532181  
Permit Number: P0105254  
Permit Type: Renewal  
County: Cuyahoga

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate ("PTIO") which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at [www.epa.ohio.gov/dapc/permitsurvey.aspx](http://www.epa.ohio.gov/dapc/permitsurvey.aspx) and give us feedback on your permitting experience. We value your opinion.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

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

If you have any questions regarding this permit, please contact the Cleveland Division of Air Quality. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc).

Sincerely,

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

Cc: CDAQ

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





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

**FINAL**

**Air Pollution Permit-to-Install and Operate  
for  
GRAPHIC PACKAGING INTERNATIONAL, INC**

Facility ID: 1318532181  
Permit Number: P0105254  
Permit Type: Renewal  
Issued: 11/16/2009  
Effective: 11/16/2009  
Expiration: 11/16/2014





State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Air Pollution Permit-to-Install and Operate**  
for  
**GRAPHIC PACKAGING INTERNATIONAL, INC**

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Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** P0105254  
**Facility ID:** 1318532181  
**Effective Date:** 11/16/2009

## Authorization

Facility ID: 1318532181  
Application Number(s): M0000470, M0000539  
Permit Number: P0105254  
Permit Description: Request for Administrative Modification to PTI 13-3300 (K008, K009) and PTI 13-04402 (K012) in accordance with OAC 3745-21-22(J)(1). Units are subject to newly promulgated requirements for lithographic printing, which requires submittal of a permit application to address new rule requirements.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 11/16/2009  
Effective Date: 11/16/2009  
Expiration Date: 11/16/2014  
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

GRAPHIC PACKAGING INTERNATIONAL, INC  
6385 Cochran Road  
Solon, OH 44139

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:

Cleveland Division of Air Quality  
2nd Floor  
75 Erieview Plaza  
Cleveland, OH 44114  
(216)664-2297

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: P0105254  
Permit Description: Request for Administrative Modification to PTI 13-3300 (K008, K009) and PTI 13-04402 (K012) in accordance with OAC 3745-21-22(J)(1). Units are subject to newly promulgated requirements for lithographic printing, which requires submittal of a permit application to address new rule requirements.

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

- |                                   |                              |
|-----------------------------------|------------------------------|
| <b>Emissions Unit ID:</b>         | <b>K008</b>                  |
| Company Equipment ID:             | Sheetfed Offset Press KBA97  |
| Superseded Permit Number:         | P0095881                     |
| General Permit Category and Type: | Not Applicable               |
| <b>Emissions Unit ID:</b>         | <b>K009</b>                  |
| Company Equipment ID:             | Sheetfed Offset Press KBA972 |
| Superseded Permit Number:         | P0095881                     |
| General Permit Category and Type: | Not Applicable               |
| <b>Emissions Unit ID:</b>         | <b>K012</b>                  |
| Company Equipment ID:             | Web Offset Press No. 3       |
| Superseded Permit Number:         | P0095882                     |
| General Permit Category and Type: | Not Applicable               |



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**Final Permit-to-Install and Operate**

**Permit Number:** P0105254

**Facility ID:** 1318532181

**Effective Date:** 11/16/2009

## **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 Cleveland Division of Air Quality 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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0105254

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**Effective Date:** 11/16/2009

change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**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

**Final Permit-to-Install and Operate**

**Permit Number:** P0105254

**Facility ID:** 1318532181

**Effective Date:** 11/16/2009

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



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.

c) 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(D)(2) To avoid Title V and MACT	See c)(2)

(2) Additional Terms and Conditions

a. The maximum annual VOC emissions for the facility shall not exceed 97.1 tons/year (tpy), based upon a rolling, 12-month summation of the monthly VOC emissions.

b. The emissions of Hazardous Air Pollutants (HAPs) from this facility shall not exceed 9.9 tpy for any single HAP and 24.9 tpy from any combination of HAPs, based on a rolling, 12-month summation of the monthly HAP material usage rates.

c. The facility-wide emission limits shall include emissions from the following units: B002, K008, K009, K010, K011, K012, K013, P001, P002 and five de minimis gluers.

d) Operational Restrictions

(1) None.

e) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for each press:



- a. the name and identification number of each ink, coating, and fountain solution employed;
  - b. the VOC content of each ink, coating and fountain solution, in weight percent;
  - c. the amount, in pounds, of each ink, coating and fountain solution employed;
  - d. the name and identification of each cleanup material employed;
  - e. the VOC content of each cleanup material, in weight percent;
  - f. the amount, in pounds, of each cleanup material employed;
  - g. the total VOC emissions from all ink, coatings, fountain solutions and cleanup materials employed calculated by summing the records of [(b) \* (c) \* (100% - solvent retention factor) for each ink/coating/fountain solution, plus (e) \* (f) for each cleanup material], in pounds and tons per month;
  - h. the total VOC material usage for all ink, coatings, fountain solutions and cleanup materials employed calculated by summing the records of [(b) \* (c) plus (e) \* (f)] for each ink, coating, fountain solution and cleanup material, in pounds and tons per month;
  - i. the updated rolling, 12-month summation of VOC material usage and VOC emissions from all ink, coatings, fountain solutions and cleanup materials employed, in tons (this shall include the information for the current month and the preceding eleven calendar months);
- (2) The permittee shall collect and record the following information each month for all materials containing any hazardous air pollutants (HAPs) for the entire facility:
- a. the name and identification number/code of each ink, coating, fountain solution, cleanup material and any other material containing any HAP;
  - b. the name of each individual HAP contained in each material applied (and identified in a. above) and the weight percent of each HAP for each HAP-containing material applied;
  - c. the number of pounds of each ink, coating, fountain solution, cleanup material, and other material applied during the month;
  - d. for each individual HAP, the total emissions from all the materials employed, in ton(s), i.e., for each individual HAP, the summation of the products of b. times c. for all the materials applied during the month, divided by 2,000 pounds;
  - e. the total combined HAPs emissions from all the materials employed during the month, in ton(s), i.e., the summation of all the individual HAPs emissions from d. above;
  - f. for each individual HAP, the total emissions during the rolling, 12-month period, i.e., the summation of the individual HAP emissions, as recorded in d. above, for the present month plus the previous 11 months of operation, in ton(s); and



- g. the total combined HAP emissions during the rolling 12-month period, i.e., the summation of all HAP emissions, as recorded in e. above, for the present month plus the previous 11 months of operation, in ton(s).

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act, or can be obtained by contacting the Cleveland Division of Air Quality (CDAQ). Material Safety Data Sheets (MSDS) typically include a listing of the solvents contained in the coatings and cleanup materials.

f) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports for each emissions unit listed in section (2)c. that identify:

- a. all deviations (excursions) of the following that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, recordkeeping and/or testing requirements in this permit:
  - i. all exceedances of the rolling 12-month VOC emission limitation;
  - ii. all exceedances of the rolling, 12-month individual HAP emission limitation for each HAP; and
  - iii. all exceedances of the rolling, 12-month total combined HAPs emission limitation.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by CDAQ.

g) Testing Requirements

- (1) Emission Limitation:  
VOC emissions shall not exceed 97.1 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by the record keeping and reporting specified in Sections e) and f).

- (2) Emission Limitation:  
Individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month period.



Applicable Compliance Method:

Compliance shall be determined by the record keeping and reporting specified in Sections e) and f).

(3) Emission Limitation:

Combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by the record keeping and reporting specified in Sections e) and f).

h) Miscellaneous Requirements

(1) None.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** P0105254  
**Facility ID:** 1318532181  
**Effective Date:** 11/16/2009

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



**1. K008, Sheetfed Offset Press KBA97**

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

Non-heatset, sheetfed, offset lithographic printing press

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. b)(2)b.-d., c)(1)-(2), d)(1)d-e, d)(3)-(5), e)(2), f)(1)b.-e., g)(1)a., and g)(3)

(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. None.

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(D)(2) To avoid Title V (Established by PTI 13-3300, 08/06/1997)	VOC emissions from this emissions unit shall not exceed:  91.7 pounds/hour (lbs/hr); and  76.9 tons/rolling, 12-month period  See b)(2)a.
b.	OAC rule 3745-21-22	Reasonably available control technology (RACT), see b)(2)b.-d., c)(1)-(2), d)(1)d-e, d)(3)-(5), e)(2), f)(1)b.-e., and g)(1)a.
c.	OAC rule 3745-114-01	See g)(3)

(2) Additional Terms and Conditions

a. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the emissions, upon issuance of this permit. The emissions of VOC(s) from this emissions unit shall not exceed 76.9 tpy, based upon a rolling, 12-month summation of the emissions.



- b. If the fountain solution contains only alcohol substitutes the permittee shall maintain the as-applied VOC content at or below 5.0%, by weight.
- c. If the fountain solution contains alcohol the permittee shall:
  - i. Maintain the as-applied VOC content below 5.0%, by weight; or
  - ii. Maintain the as-applied VOC content at or below 8.5% by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.
- d. The permittee shall meet one of the following requirements for each cleaning solution used for cleaning on the emissions unit:
  - i. maintain the as-applied VOC content at or below 70%, by weight; or
  - ii. maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 20 Celsius (68 degrees Fahrenheit).

The use of cleaning solutions not meeting the specifications of d.i. and d.ii. is permitted provided that the quantity used does not exceed 110 gallons over any consecutive 12-month period.

- e. The hourly VOC emissions limit was established to reflect the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

c) Operational Restrictions

- (1) The permittee shall keep all solvent containers closed at all times unless, filling, draining, or performing cleanup operations.
- (2) The permittee shall keep all solvent-laden shop towels in closed containers when not being used.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for this emissions unit:
  - a. the company identification of each ink, coating, fountain solution and clean up material;
  - b. the amount, in pounds, of each ink, coating, fountain solution and clean up material employed;
  - c. the VOC content of each ink, coating, fountain solution and clean up material employed, in weight percent;
  - d. the VOC content or VOC composite partial vapor pressure of all cleaning materials employed in all the lithographic printing operations; and



- e. the total amount, in pounds, of all the clean up materials employed that exceed the allowable VOC content or VOC composite vapor pressure.
  - (2) The permittee shall calculate, see Section g)(2), and maintain monthly records of the VOC emissions and the rolling 12-month emissions of VOC.
  - (3) For a fountain solution containing alcohol, when adding alcohol to a batch previously tested in accordance with OAC rule 3745-21-22(F)(2), the permittee shall measure the VOC (alcohol) content of any altered fountain solution, at the time of alteration, in percent weight, of the fountain solution employed in the press:
    - a. The alcohol content of the fountain solution shall be measured using a hydrometer. The hydrometer shall have a visual, analog, or digital readout with an accuracy of 0.5 percent.
    - b. A standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution.
    - c. The permittee shall maintain records of the results of the measurements at the facility for a period of five years.
  - (4) For a fountain solution that contains alcohol and is refrigerated to comply with condition b)(2)(c)(ii):
    - a. measure on a daily basis the temperature, in degrees Fahrenheit, of the fountain solution; and
    - b. maintain records of the results of the measurements at the facility for a period of five years.
  - (5) The permittee shall maintain records of the following information for each batch of fountain solution prepared for use in the emissions unit:
    - a. the volume and VOC content of each concentrated alcohol substitute, added to make the batch of fountain solution, based upon the manufacturer's laboratory analysis using US EPA Method 24;
    - b. the volume of alcohol added to make the batch of fountain solution;
    - c. the volume of water added to make the batch of fountain solution;
    - d. the calculated VOC content of the final, mixed batch; and
    - e. the date and time the batch was prepared.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
    - a. all deviations (excursions) of the following that restrict the PTE of any regulated air pollutant and have been detected by the monitoring, recordkeeping and/or testing requirements in this permit:



- i. all exceedances of the rolling 12-month limitation for VOC emissions; and
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by CDAQ.

- (2) The permittee shall notify the CDAQ of the following exceedances. Each notification shall be submitted to the CDAQ within forty-five days after the instance occurs, and it shall include a copy of the record showing the instance.
    - a. each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in b)(2)b or c.;
    - b. each temperature reading that shows an exceedance of the temperature limitation specified in b)(2)c.;
    - c. each calculated VOC content that exceeds the VOC content limitation specified in b)(2)c.;
    - d. each instance when an exceedance of the alcohol usage restriction as specified for fountain solutions in b)(2)c.; and
    - e. each instance when an exceedance of the VOC content or VOC composite partial vapor pressure as specified for each cleaning material in b)(2)d.
  - (3) 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.
- f) Testing Requirements
- (1) Compliance with the emission limitation(s) in Section b) of these terms and conditions shall be determined in accordance with the following method(s):
    - a. Emission Limitation:  
VOC emissions shall not exceed 76.9 tons/rolling, 12-month period.



Applicable Compliance Method:

Compliance shall be determined by the record keeping and reporting specified in Sections d) and e).

b. Emission Limitation:

If the fountain solution contains only alcohol substitutes the as-applied VOC content must be maintained below 5.0 %, by weight.

Applicable Compliance Method:

The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(2).

c. Emission Limitation:

If the fountain solution contains alcohol:

- i. Maintain the as-applied VOC content below 5.0%, by weight; or
- ii. Maintain the as-applied VOC content at or below 8.5% by weight, and refrigerate the fountain solution to 60 Fahrenheit or less.

Applicable Compliance Method(s):

The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(2).

The temperature requirement shall be met using a thermometer or other temperature detection device capable of reading to 0.5 degrees Fahrenheit.

d. Emission Limitation:

The VOC content of each cleaning material shall be maintained at or below 70% by weight, as applied.

Applicable Compliance Method:

The VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(4).

e. Emission Limitation:

The VOC composite partial vapor pressure shall be maintained at or below 10 mmHg at 68 degrees Fahrenheit, as applied.

Applicable Compliance Method:

The VOC content shall be determined by one of the methods outlined in OAC rule 3745-21-22(F)(5).

g) Miscellaneous Requirements

- (1) The potential to emit VOC from this emissions unit was established based on the following calculation:

Calculations for Inks and Cleanup Materials:

(hourly usage in lbs/hr)(% VOC)(100% - VOC retention factor) = lbs VOC/hr

Calculations for Coating/Fountain Solution:

(hourly usage in lbs/hr)(% VOC) = lbs VOC/hrs



Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/hr}) + (\text{Coating lbs VOC/hr}) + (\text{Fountain Solution lbs VOC/hr}) + (\text{Cleanup lbs VOC/hr}) = \text{total lbs VOC/hr}$$

- a. For purposes of determining VOC emissions, the following shall be used:
  - i. 95 % VOC retention factor shall be used for sheet-fed inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process;
  - ii. 50 % VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than 10 mm Hg at 20 Celsius (68 Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.

If the permittee sends waste-off site for waste disposal, the permittee may take a credit for that in emission calculations, provided that the permittee keeps records to calculate the total amount of VOC in the waste disposed of from the emissions unit.

- (2) The monthly VOC emission rate shall be calculated using the following equations:

Calculations for Inks and Cleanup Materials:

$$(\text{monthly usage in lbs/month})(\% \text{ VOC})(100\% - \text{VOC retention factor}) = \text{lbs VOC/month}$$

Calculations for Coating/Fountain Solution:

$$(\text{monthly usage in lbs/month})(\% \text{ VOC}) = \text{lbs VOC/month}$$

Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/month}) + (\text{Coating lbs VOC/month}) + (\text{Fountain Solution lbs VOC/month}) + (\text{Cleanup lbs VOC/month}) = \text{total lbs VOC/month}$$

- (3) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.



**2. K009, Sheetfed Offset Press KBA972**

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

Non-heatset, sheetfed, offset lithographic printing press

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. b)(2)b.-d., c)(1)-(2), d)(1)d-e, d)(3)-(5), e)(2), f)(1)b.-e., g)(1)a., and g)(3)

(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. None.

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(D)(2) To avoid Title V (Established by PTI 13-3300, 08/06/1997)	VOC emissions from this emissions unit shall not exceed:  91.7 pounds/hour (lbs/hr); and  76.9 tons/rolling, 12-month period  See b)(2)a.
b.	OAC rule 3745-21-22	Reasonably available control technology (RACT), see b)(2)b.-d., c)(1)-(2), d)(1)d-e, d)(3)-(5), e)(2), f)(1)b.-e., and g)(1)a.
c.	OAC rule 3745-114-01	See g)(3)

(2) Additional Terms and Conditions

a. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the emissions, upon issuance of this permit. The emissions of VOC(s) from this emissions unit shall not exceed 76.9 tons per year (tpy), based upon a rolling, 12-month summation of the emissions.



- b. If the fountain solution contains only alcohol substitutes the permittee shall maintain the as-applied VOC content at or below 5.0%, by weight.
- c. If the fountain solution contains alcohol the permittee shall:
  - i. Maintain the as-applied VOC content below 5.0%, by weight; or
  - ii. Maintain the as-applied VOC content at or below 8.5% by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.
- d. The permittee shall meet one of the following requirements for each cleaning solution used for cleaning on the emissions unit:
  - i. maintain the as-applied VOC content at or below 70%, by weight; or
  - ii. maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 20 degrees Celsius (68 degrees Fahrenheit).

The use of cleaning solutions not meeting the specifications of (2)c. is permitted provided that the quantity used does not exceed 110 gallons over any consecutive 12-month period.

- e. The hourly VOC emissions limit was established to reflect the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

c) Operational Restriction

- (1) The permittee shall keep all solvent containers closed at all times unless, filling, draining, or performing cleanup operations.
- (2) The permittee shall keep all solvent-laden shop towels in closed containers when not being used.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for this emissions unit:
  - a. the company identification of each ink, coating, fountain solution and cleanup material;
  - b. the amount, in pounds, of each ink, coating, fountain solution and cleanup material employed;
  - c. the VOC content of each ink, coating, fountain solution and cleanup material employed, in percent weight;
  - d. the VOC content or VOC composite partial vapor pressure of all cleaning materials employed in all the lithographic printing operations; and



- e. the total amount, in pounds, of all the cleanup materials employed that exceed the allowable VOC content or VOC composite vapor pressure.
  - (2) The permittee shall calculate, see Section g)(2), and maintain monthly records of the VOC emissions and the rolling 12-month emissions of VOC.
  - (3) For a fountain solution containing alcohol, when adding alcohol to a batch previously tested in accordance with OAC rule 3745-21-22 (F)(2), the permittee shall measure the VOC (alcohol) content of any altered fountain solution, at the time of alteration, in percent weight, of the fountain solution employed in the press:
    - a. The alcohol content of the fountain solution shall be measured using a hydrometer. The hydrometer shall have a visual, analog, or digital readout with an accuracy of 0.5 percent.
    - b. A standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution.
    - c. The permittee shall maintain records of the results of the measurements at the facility for a period of five years.
  - (4) For a fountain solution that contains alcohol and is refrigerated to comply with condition b)(2)(c)(ii):
    - a. measure on a daily basis the temperature, in degrees Fahrenheit, of the fountain solution; and
    - b. maintain records of the results of the measurements at the facility for a period of five years.
  - (5) The permittee shall maintain records of the following information for each batch of fountain solution prepared for use in the emissions unit:
    - a. the volume and VOC content of each concentrated alcohol substitute, added to make the batch of fountain solution, based upon the manufacturer's laboratory analysis using US EPA Method 24;
    - b. the volume of alcohol added to make the batch of fountain solution;
    - c. the volume of water added to make the batch of fountain solution;
    - d. the calculated VOC content of the final, mixed batch; and
    - e. the date and time the batch was prepared.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
    - a. all deviations (excursions) of the following that restrict the PTE of any regulated air pollutant and have been detected by the monitoring, recordkeeping and/or testing requirements in this permit:



- i. all exceedances of the rolling 12-month limitation for VOC emissions; and
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by CDAQ.

- (2) The permittee shall notify the CDAQ of the following exceedances. Each notification shall be submitted to the CDAQ within forty-five days after the instance occurs, and it shall include a copy of the record showing the instance.
    - a. each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in b)(2)b or c.;
    - b. each temperature reading that shows an exceedance of the temperature limitation specified in b)(2)c.;
    - c. each calculated VOC content that exceeds the VOC content limitation specified in b)(2)c.;
    - d. each instance when an exceedance of the alcohol usage restriction as specified for fountain solutions in b)(2)c.; and
    - e. each instance when an exceedance of the VOC content or VOC composite partial vapor pressure as specified for each cleaning material in b)(2)d.
  - (3) 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.
- f) Testing Requirements
- (1) Compliance with the emission limitation(s) in Section b) of these terms and conditions shall be determined in accordance with the following method(s):
    - a. Emission Limitation:  
VOC emissions shall not exceed 76.9 tons/rolling, 12-month period.



Applicable Compliance Method:

Compliance shall be determined by the record keeping and reporting specified in Sections d) and e).

b. Emission Limitation:

If the fountain solution contains only alcohol substitutes the as-applied VOC content must be maintained below 5.0 %, by weight.

Applicable Compliance Method:

The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(2).

c. Emission Limitation:

If the fountain solution contains alcohol:

- i. Maintain the as-applied VOC content below 5.0%, by weight; or
- ii. Maintain the as-applied VOC content at or below 8.5% by weight, and refrigerate the fountain solution to 60 Fahrenheit or less.

Applicable Compliance Methods:

The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(2).

The temperature requirement shall be met using a thermometer or other temperature detection device capable of reading to 0.5 degrees Fahrenheit.

d. Emission Limitation:

The VOC content of each cleaning material shall be maintained at or below 70% by weight, as applied.

Applicable Compliance Method:

The VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(4).

e. Emission Limitation:

The VOC composite partial vapor pressure shall be maintained at or below 10 mmHg at 68 degrees Fahrenheit, as applied.

Applicable Compliance Method:

The VOC content shall be determined by one of the methods outlined in OAC rule 3745-21-22(F)(5).

g) Miscellaneous Requirements

- (1) The potential to emit VOC from this emissions unit was established based on the following calculation:

Calculations for Inks and Cleanup Materials:

$(\text{hourly usage in lbs/hr})(\% \text{ VOC})(100\% - \text{VOC retention factor}) = \text{lbs VOC/hr}$

Calculations for Coating/Fountain Solution:

$(\text{hourly usage in lbs/hr})(\% \text{ VOC}) = \text{lbs VOC/hrs}$



Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/hr}) + (\text{Coating lbs VOC/hr}) + (\text{Fountain Solution lbs VOC/hr}) + (\text{Cleanup lbs VOC/hr}) = \text{total lbs VOC/hr}$$

- a. For purposes of determining VOC emissions, the following shall be used:
  - i. 95 % VOC retention factor shall be used for sheet-fed inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process;
  - ii. 50 % VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than 10 mm Hg at 20 Celsius (68 degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.

If the permittee sends waste-off site for waste disposal, the permittee may take a credit for that in emission calculations, provided that the permittee keeps records to calculate the total amount of VOC in the waste disposed of from the emissions unit.

- (2) The monthly VOC emission rate shall be calculated using the following equations:

Calculations for Inks and Cleanup Materials:

$$(\text{monthly usage in lbs/month})(\% \text{ VOC})(100\% - \text{VOC retention factor}) = \text{lbs VOC/month}$$

Calculations for Coating/Fountain Solution:

$$(\text{monthly usage in lbs/month})(\% \text{ VOC}) = \text{lbs VOC/month}$$

Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/month}) + (\text{Coating lbs VOC/month}) + (\text{Fountain Solution lbs VOC/month}) + (\text{Cleanup lbs VOC/month}) = \text{total lbs VOC/month}$$

- (2) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.



**3. K012, Web Offset Press No. 3**

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

Komori Chambon, eight color, non-heatset web, offset lithographic press with two coating units applying water-based coatings

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. b)(2)b.-c., c)(1)-(2), d)(1), d)(3)-(7), e)(1)a.ii., e)(2), f)(1)b.-c., and g)(1)a.

(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. None.

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(D)(2) To avoid Title V (Established by PTI 13-04402, 11/16/2006)	VOC emissions from this emissions unit shall not exceed:  30.2 pounds/hour (lbs/hr) from inks, coatings and fountain solutions;  9.1 tons/rolling, 12-month period, from a combination of inks, coatings, fountain solutions and clean up materials;  See b)(2)a.
b.	OAC rule 3745-21-22	Reasonably available control technology (RACT), see b)(2)b.-c., c)(1)-(2), d)(1)-(3), e)(2), and f)(1)b.-c., and g)(1)a.
c.	OAC rule 3745-114-01	See d)(4)-(7) and e)(1)a.ii.



(2) Additional Terms and Conditions

- a. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the emissions, upon issuance of this permit. The emissions of VOC(s) from this emissions unit shall not exceed 9.1 tons per year (tpy), based upon a rolling, 12-month summation of the emissions.
- b. The permittee shall maintain the as-applied VOC content of the fountain solution used for the non-heatset web offset lithographic printing press at or below 5.0 percent, by weight, and use no alcohol in the fountain solution.
- c. The permittee shall meet one of the following requirements for each cleaning solution used for the non-heatset web offset lithographic printing press:
  - i. maintain the as-applied VOC content at or below 70%, by weight; or
  - ii. maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 20 degrees Celsius (68 degrees Fahrenheit).

The use of cleaning solutions not meeting the specifications of (2)d. is permitted provided that the quantity used does not exceed 110 gallons over any consecutive 12-month period.

- d. The hourly VOC emissions limit was established to reflect the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this short term emissions limitation.

c) Operational Restrictions

- (1) The permittee shall keep all solvent containers closed at all times unless, filling, draining, or performing cleanup operations.
- (2) The permittee shall keep all solvent-laden shop towels in closed containers when not being used.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the press:
  - a. the company identification of each ink, coating, fountain solution and clean up material;
  - b. the amount, in pounds, of each ink, coating, fountain solution and clean up material employed;
  - c. the VOC content of each ink, coating, fountain solution and clean up material employed, in percent weight.
  - d. the VOC content or VOC composite partial vapor pressure of all cleaning materials employed in all the lithographic printing operations; and



- e. the total amount, in pounds, of all the clean up materials employed that exceeds the allowable VOC content or VOC composite vapor pressure.
- (2) The permittee shall calculate, see Section g)(2), and maintain monthly records of the VOC emissions and the rolling 12-month emissions of VOC.
  - (3) The permittee shall document all periods of time when alcohol was used in the press's fountain solution and the volume of alcohol used in each instance.
  - (4) The federally enforceable permit-to-install and operate (FEPTIO) application for this emissions unit, **K012**, 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 "Toxic 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 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 "Review 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) "Threshold 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., "8" hours per day and "5" 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):



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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants or "worst case" toxic contaminant(s):

Toxic Contaminant: Ammonia

TLV (mg/m<sup>3</sup>): 17.41

Maximum Hourly Emission Rate (lbs/hr): 4.35

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 292

MAGLC (ug/m<sup>3</sup>): 415

The permittee, having demonstrated that emissions of Ammonia, from emissions unit **K012**, is estimated to be less than 80% of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (5) 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 "Toxic Air Contaminant Statute", ORC 3704.03(F), 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 "Toxic 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 FEPTIO 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.

- (6) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":



- 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 "Toxic Air Contaminant Statute", 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 "Toxic Air Contaminant Statute", 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 "Toxic Air Contaminant Statute", 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.
- (7) 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 "Toxic Air Contaminant Statute", 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.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
    - a. all deviations (excursions) of the following that restrict the PTE of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
      - i. all exceedances of the rolling 12-month limitation for VOC emissions; and
      - ii. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit, or the exhaust stack have been made, a statement to this effect.
    - b. the probable cause of each deviation (excursion);
    - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
    - d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality (CDAQ).

- (2) The permittee shall notify the CDAQ of the following exceedance for the press. Each notification shall be submitted to the CDAQ within forty-five days after the instance occurs, and it shall include a copy of the record showing the instance.
  - a. each calculated VOC content that exceeds the VOC content limitation specified in b)(2)b.;
  - b. each instance when alcohol is used in the fountain solution; and
  - c. each instance when an exceedance of the VOC content or VOC composite partial vapor pressure as specified for each cleaning material in b)(2)c.
- (3) 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.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in Section b) of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
 VOC emissions shall not exceed 9.1 tons/rolling, 12-month period from inks, coatings, fountain solutions and cleanup materials  
  
Applicable Compliance Method:  
 Compliance shall be determined by the record keeping and reporting specified in Sections d) and e).
  - b. Emission Limitation:  
 The permittee shall maintain the as-applied VOC content of the fountain solution used for the press at or below 5.0%, by weight, and use no alcohol in the fountain solution.  
  
Emission Limitation:  
 The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(2).
  - c. Emission Limitation:  
 The permittee shall meet one of the following requirements for each cleaning solution used for the press:
    - i. maintain the as-applied VOC content at or below 70%, by weight; or



- ii. maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 20 degrees Celsius (68 degrees Fahrenheit).

Emission Limitation:

The as-applied VOC content shall be determined by one of the methods outlined in OAC 3745-21-22(F)(4).

g) Miscellaneous Requirements

- (1) The potential to emit VOC from this emissions unit was established based on the following calculation:

Calculations for Inks and Cleanup Materials:

$$(\text{Hourly Usage in lb/hr})(\% \text{ VOC})(100\% - \text{Ink/cleanup retention factor}) = \text{lbs VOC/hr}$$

Calculations for Coating/Fountain Solution:

$$(\text{Hourly Usage in lb/hr})(\% \text{ VOC}) = \text{lbs VOC/hrs}$$

Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/hr}) + (\text{Coating lbs VOC/hr}) + (\text{Fountain Solution lbs VOC/hr}) + (\text{Cleanup lbs VOC/hr}) = \text{total lbs VOC/hr}$$

- a. For purposes of determining VOC emissions, the following shall be used:

- i. 95% VOC retention factor shall be used for non-heatset web inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process;
- ii. 50% VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than 10 mm Hg at 20 Celsius (68 degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.

If the permittee sends waste-off site for waste disposal, the permittee may take a credit for that in emission calculations, provided that the permittee keeps records to calculate the total amount of VOC in the waste disposed of from the emissions unit.

- (2) The monthly VOC emission rate shall be calculated using the following equations:

Calculations for Inks and clean up materials:

$$(\text{lbs ink or cleanup used/month})(\% \text{ VOC})(100\% - \text{Ink/cleanup retention factor}) = \text{lbs VOC/month}$$

Calculations for Coating/Fountain Solution:

$$(\text{Monthly Usage in lbs/month})(\% \text{ VOC}) = \text{lbs VOC/month}$$

Total Emissions in lbs/hr:

$$(\text{Ink lbs VOC/month}) + (\text{Coating lbs VOC/month}) + (\text{Fountain Solution lbs VOC/month}) + (\text{Cleanup lbs VOC/month}) = \text{total lbs VOC/month}$$