



State of Ohio Environmental Protection Agency

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Columbus, Ohio 43215

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Columbus, OH 43216-1049

11/17/2009

Scot Adkins  
Rohrer Corporation  
PO Box 1009  
717 Seville Rd  
Wadsworth, OH 44282

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 1652100108  
Permit Number: P0105631  
Permit Type: Administrative Modification  
County: Medina

Certified Mail

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

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 Akron Regional Air Quality Management District. 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: ARAQMD

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  
Rohrer Corporation**

Facility ID: 1652100108  
Permit Number: P0105631  
Permit Type: Administrative Modification  
Issued: 11/17/2009  
Effective: 11/17/2009  
Expiration: 8/12/2018





**Air Pollution Permit-to-Install and Operate**  
for  
Rohrer Corporation

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** P0105631  
**Facility ID:** 1652100108  
**Effective Date:** 11/17/2009

## Authorization

Facility ID: 1652100108  
Application Number(s): A0038446  
Permit Number: P0105631  
Permit Description: Administrative modification of PTI 16-02538 issued final on 8/12/2008 to fix calculation errors in the allowable annual emissions and to adjust the short term limitations.  
Permit Type: Administrative Modification  
Permit Fee: \$800.00  
Issue Date: 11/17/2009  
Effective Date: 11/17/2009  
Expiration Date: 8/12/2018  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Rohrer Corporation  
717 Seville Rd  
Wadsworth, OH 44281

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:

Akron Regional Air Quality Management District  
146 South High Street, Room 904  
Akron, OH 44308  
(330)375-2480

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: P0105631  
Permit Description: Administrative modification of PTI 16-02538 issued final on 8/12/2008 to fix calculation errors in the allowable annual emissions and to adjust the short term limitations.

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

**Emissions Unit ID:** K001  
Company Equipment ID: Comco 10-Unit  
Superseded Permit Number: 16-02538  
General Permit Category and Type: Not Applicable

**Group Name: Group 1**

<b>Emissions Unit ID:</b>	<b>K002</b>
Company Equipment ID:	Billhoffer 2
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>K003</b>
Company Equipment ID:	Billhoffer 21
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable

**Group Name: Group 2**

<b>Emissions Unit ID:</b>	<b>R001</b>
Company Equipment ID:	Heidelberg 3-Color
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R003</b>
Company Equipment ID:	Planeta 5-Color
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable

**Group Name: Group 3**

<b>Emissions Unit ID:</b>	<b>R002</b>
Company Equipment ID:	Heidelberg 6-Color
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R004</b>
Company Equipment ID:	Komori 6-Color
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R005</b>
Company Equipment ID:	Komori 8-Color
Superseded Permit Number:	16-02538
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

## **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 Akron Regional Air Quality Management District 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

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

**Permit Number:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

**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:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

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

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

**Permit Number:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

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



**1. K001, Comco 10-Unit**

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

10-unit, 18 inch Comco flexographic printing press - Comco 10-Unit.

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. Paragraph g)(1) of this permit.

(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 operation(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)	The emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 187.0 pounds per month and 1.12 tons per year.
b.	OAC rule 3745-21-09(Y)(2)(d)	This facility is exempt from OAC rule 3745-21-09(Y)(1) because the total maximum usage of VOC in all coatings and inks employed in all flexographic, packaging rotogravure and publication rotogravure printing lines within the facility is less than or equal to 100 tons per year.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month and maintain the information at the facility for 5 years:
  - a. the company identification for each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - b. the number of gallons or pounds of each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005, combined;
  - c. the VOC content of each coating, ink, fountain solution concentrate, fountain solution additive and cleanup material, in pounds per gallon or weight fraction employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - d. the operating hours of each emissions unit; and
  - e. the total VOC emission rate for this emissions unit, in pounds per month.

The total VOC emission rate for all coatings, inks, fountain solution concentrates, and fountain solution additives calculated in accordance with Engineering Guide #68 plus the sum of Paragraph d)(1)(b) times Paragraph d)(1)(c) of this permit for each cleanup material).

e) Reporting Requirements

- (1) 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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in Paragraph b)(1) of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The emissions of VOC from this emissions unit shall not exceed 187.0 pounds per month.

Applicable Compliance Method:

Compliance with the monthly allowable VOC emission limitation above shall be demonstrated through record keeping requirements established in Paragraph d)(1) of this permit.



b. Emission Limitation:

The emissions of VOC from this emissions unit shall not exceed 1.12 tons per year.

Applicable Compliance Method:

The annual allowable VOC emission limitation above was determined by multiplying the monthly allowable VOC emission limitation by 12 months per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the monthly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute," ORC Section 3704.03(F)(4)(b), was not necessary because the emissions units' 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 permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is 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 PTIO.



**2. Emissions Unit Group - Group 1: K002, K003,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
K002	48 inch Billhoffer roll coater - Billhoffer 2.
K003	48 inch Billhoffer roll coater - Billhoffer 21.

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. Paragraphs d)(3), d)(4), d)(5), d)(6), and e)(3) of this permit.

(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 operation(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)	The emissions of volatile organic compounds (VOC) from emissions unit K002 shall not exceed 1177.0 pounds per month and 7.06 tons per year.  The emissions of VOC from emissions unit K003 shall not exceed 552.0 pounds per month and 3.31 tons per year.
b.	OAC rule 3745-21-09(F)	Coatings applied in the coating operations shall not exceed 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents.

(2) Additional Terms and Conditions

a. None.



c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee, having chosen to demonstrate compliance through the use of compliant coatings, shall collect and record the following information each month for the coating line and shall maintain this information at the facility for a period of 5 years:

- a. the name and identification number of each coating, as applied; and
- b. the mass of VOC per volume of each coating, excluding water and exempt solvents, as applied, calculated as follows:

$C_{VOC,2}$  is the VOC content in pounds of VOC per gallon of coating, excluding water and exempt solvents calculated as follows:

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

where:

$D_C$  = the density of coating, in pounds of coating per gallon of coating.

$$W_{VOC} = W_{VM} - W_W - W_{ES}$$

$V_S$  = volume fraction of solids (nonvolatile matter) in coating, in gallons of solids per gallon of coating.

$$V_{VOC} = V_{VM} - V_W - V_{ES}$$

$W_{VM}$  = weight fraction of volatile matter in coating, in pound of volatile matter per pound of coating.

$W_W$  = weight fraction of water in coating, in pound of water per pound of coating.

$W_{ES}$  = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating.

$V_{VM}$  = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating.

$V_W$  = volume fraction of water in coating, in gallon of water per gallon of coating.

$V_{ES}$  = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating.

This information does not have to be kept on a line-by-line basis, unless one or more of the lines or emissions units is subject to specific "gallons/year" and/or "tons/year" limitation in the permit-to-install and operate (PTIO), where the above-mentioned information shall be maintained separately for each such line. Also, if the permittee



mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture. These records shall be maintained for a period of not less than 5 years.

- (2) The permittee shall collect and record the following information for each month and maintain the information at the facility for 5 years:
- a. the company identification for each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - b. the number of gallons or pounds of each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005, combined;
  - c. the VOC content of each coating, ink, fountain solution concentrate, fountain solution additive and cleanup material, in pounds per gallon or weight fraction employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - d. the operating hours of each emissions unit; and
  - e. the total VOC emission rate for each emissions unit, in pounds per month.

The total VOC emission rate for all coatings, inks, fountain solution concentrates, and fountain solution additives calculated in accordance with Engineering Guide #68 plus the sum of Paragraph d)(2)(b) times Paragraph d)(2)(c) for each cleanup material).

- (3) The PTIO application for emissions units K002 and K003 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute," ORC Section 3704.03(F), was applied to these emissions units 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 "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 work day and a 40-hour work week, for each toxic compound(s) emitted from the emissions units, (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 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 10 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 units, 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 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 (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

Toxic Contaminant: toluene

TLV (mg/m3): 75

Maximum Hourly Emission Rate (lbs/hr): 0.36\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 474.7

MAGLC (ug/m3): 1785.7

\*Combined emission rate from emissions units K002 and K003.

The permittee, has demonstrated that emissions of toluene, from emissions units K002 and K003, is calculated to be less than 80 per cent of the MAGLC; 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 Section 3704.03(F).

(4) Prior to making any physical changes to or changes in the method of operation of the emissions units 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, which was modeled from the initial (or last) application; and
- c. physical changes to the emissions units or 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" 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 Section 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 PTIO 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.

- (5) The permittee shall collect, record, and retain the following information at the facility for 5 years for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute," ORC Section 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 MAGLC for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute," ORC Section 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 Section 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 Section 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
- (6) The permittee shall maintain a record at the facility for 5 years 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 Section 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 notify the appropriate Ohio EPA District Office or local air agency in writing of any monthly record showing the use of noncomplying coatings. The notification shall include a copy of such record and shall be sent to the appropriate Ohio EPA District Office or local air agency within 30 days following the end of the calendar month.
- (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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) 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 Toxic Air Contaminant Statute, ORC Section 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the PER shall include a statement to this effect.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in Paragraph b)(1) of this permit shall be determined in accordance with the following method(s):

a. Emission Limitations:

The emissions of VOC from emissions unit K002 shall not exceed 1177.0 pounds per month.

The emissions of VOC from emissions unit K003 shall not exceed 552.0 pounds per month.

Applicable Compliance Method:

Compliance with the monthly allowable VOC emission limitations above shall be demonstrated through record keeping requirements established in Paragraph d)(2) of this permit.

b. Emission Limitations:

The emissions of VOC from emissions unit K002 shall not exceed 7.06 tons per year.

The emissions of VOC from emissions unit K003 shall not exceed 3.31 tons per year.

Applicable Compliance Method:

The annual allowable VOC emission limitations above were determined by multiplying the monthly allowable VOC emission limitations by 12 months per



year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the monthly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

c. Emission Limitation:

Coatings applied in the coating operations shall not exceed 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents.

Applicable Compliance Method:

Compliance with the allowable VOC content limitation above shall be demonstrated through the record keeping requirements established in Paragraph d)(1) of this permit.

Formulation data or USEPA Methods 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the VOC content of each chemical.

g) Miscellaneous Requirements

(1) None.



**3. Emissions Unit Group - Group 2: R001, R003,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
R001	Three color, 40 inch Heidelberg offset lithographic printing press - Heidelberg 3-Color.
R003	Five color, 50 inch Planeta offset lithographic printing press - Planeta 5-Color.

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. Paragraph g)(1) of this permit.

(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 operation(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)	The emissions of volatile organic compounds (VOC) from emissions unit R001 shall not exceed 850.0 pounds per month and 5.10 tons per year.  The emissions of VOC from emissions unit R003 shall not exceed 2200.0 pounds per month and 13.20 tons per year.
b.	OAC rule 3745-21-22	The permittee shall comply with the following terms and conditions by April 2, 2010: Paragraphs b)(2)a., b)(2)b., c)(2), c)(3), d)(2), d)(3), d)(4), d)(5), e)(1), f)(1)c., f)(1)d., and f)(1)e. of this permit.

(2) Additional Terms and Conditions

a. By April 2, 2010, the permittee shall meet one of the following requirements for the fountain solution employed on the press:



- i. If the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight; or
- ii. If the fountain solution contains alcohol:
  - (a) Maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight; or
  - (b) Maintain the as-applied VOC content of the fountain solution at or below 8.5 per cent, by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.
- b. By April 2, 2010, the permittee shall meet one of the following requirements for each cleaning solution used for cleaning on the press:
  - i. Maintain the as-applied VOC content at or below 70 per cent, by weight; or
  - ii. Maintain the as-applied VOC composite partial vapor pressure at or below 10 millimeters of mercury (mm Hg) at 68 degrees Fahrenheit.

The use of cleaning solutions not meeting the specifications in Paragraphs b)(2)b.i. and b)(2)b.ii. above is permitted provided that the quantity used does not exceed 110 gallons over any consecutive 12 month period.

c) Operational Restrictions

- (1) The used wash rags/shop towels shall be kept in closed containers.
- (2) By April 2, 2010, the permittee shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.
- (3) By April 2, 2010, 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 and maintain the information at the facility for 5 years:
  - a. the company identification for each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - b. the number of gallons or pounds of each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005, combined;
  - c. the VOC content of each coating, ink, fountain solution concentrate, fountain solution additive and cleanup material, in pounds per gallon or weight fraction



employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;

- d. the operating hours of each emissions unit;
- e. documentation of composite vapor pressure in mm Hg at 68 degrees Fahrenheit for each manual cleanup material where the 50 percent retention factor is used in the emission calculation; and
- f. the total VOC emission rate for each emissions unit, in pounds per month.

The total VOC emission rate for all coatings, inks, fountain solution concentrates, and fountain solution additives calculated in accordance with Engineering Guide #68.

Cleanup materials will be apportioned to each emissions unit (EU) as follows: R001 through R005 total cleanup emissions will be multiplied by an emissions-unit-weighted usage factor for each emissions unit determined as follows each month:

$$\frac{EU_{R00X} \text{ operation hours} \times EU_{R00X} \text{ capacity in square feet per hour}}{\sum_{R001-R005} (EU_{R00X} \text{ operation hours} \times EU_{R00X} \text{ capacity in square feet per hour})}$$

(2) By April 2, 2010, the permittee shall measure:

- a. The VOC (alcohol) content, in accordance with Paragraph f)(1)c.iv. below, of any altered fountain solution, at the time of alteration, in per cent by weight, of the fountain solution employed in the press and shall maintain records of the results of the measurements at the facility for a period of 5 years. 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 per cent; and a standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution.
- b. On a daily basis, the temperature, in degrees Fahrenheit, of the fountain solution, if the permittee refrigerates the fountain solution in accordance with Paragraph b)(2)a.ii.(b) above, and shall maintain records of the results of the measurements at the facility for a period of 5 years.

(3) By April 2, 2010, the permittee shall maintain records of the following information at the facility for 5 years for each batch of fountain solution prepared for use in the press:

- 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 USEPA 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.
- e. The date and time the batch was prepared.



- (4) By April 2, 2010, the permittee shall maintain monthly records at the facility for 5 years of the VOC content or VOC composite partial vapor pressure of all cleaning materials employed in all the lithographic and letterpress printing operations.
  - (5) By April 2, 2010, the permittee shall maintain monthly records of the following information at the facility for 5 years:
    - a. The total amount, in gallons, of all the cleanup materials employed; and
    - b. The total amount, in gallons, of all the cleanup materials employed that exceeds the allowable VOC content or VOC composite vapor pressure.
- e) Reporting Requirements
- (1) Starting on April 2, 2010, the permittee shall notify the appropriate Ohio EPA District Office or local air agency of the following exceedances:
    - a. Each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in Paragraphs b)(2)a.i. or b)(2)a.ii above.
    - b. Each temperature reading that shows an exceedance of the temperature limitation specified in Paragraph b)(2)a.ii.(b) above.
    - c. Each calculated VOC content that exceeds the VOC content limitation specified in Paragraph b)(2)a.ii. above.
    - d. Each instance when an exceedance of the alcohol usage restriction as specified for fountain solutions in Paragraph b)(2)a.ii. above.
    - e. Each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in Paragraph b)(2)b. above for cleanup materials occurs.

Each notification shall be submitted to the appropriate Ohio EPA District Office or local air agency within 45 days after the instance occurs, and it shall include a copy of the record showing the instance.

- (2) The permittee shall notify the Ohio EPA District Office or local air agency in writing within 30 days following the completion of the first documented achievement of compliance with each of the requirements in Paragraphs (D)(2) through (D)(7) of OAC rule 3745-21-22. The compliance certification under these paragraphs shall provide the following, where applicable:
  - a. A description of the requirements;
  - b. A description of the records that document continuing compliance;
  - c. The results of any compliance tests, including documentation of test data;
  - d. The results of any records that document continuing compliance, including calculations; and



- e. A statement by the permittee of the lithographic printing or letterpress printing facility as to whether the offset lithographic printing press or letterpress printing press has complied with the requirement(s).
  
- (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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
  
- f) Testing Requirements
  - (1) Compliance with the emission limitation(s) in Paragraph b)(1) of this permit shall be determined in accordance with the following method(s):
    - a. Emission Limitations:

The emissions of VOC from emissions unit R001 shall not exceed 850.0 pounds per month.

The emissions of VOC from emissions unit R003 shall not exceed 2200.0 pounds per month.

Applicable Compliance Method:

Compliance with the monthly allowable VOC emission limitations above shall be demonstrated through record keeping requirements established in Paragraph d)(1) of this permit.
    - b. Emission Limitations:

The emissions of VOC from emissions unit R001 shall not exceed 5.10 tons per year.

The emissions of VOC from emissions unit R003 shall not exceed 13.20 tons per year.

Applicable Compliance Method:

The annual allowable VOC emission limitations above were determined by multiplying the monthly allowable VOC emission limitations by 12 months per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the monthly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.
    - c. Emission Limitations:

By April 2, 2010, if the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.



By April 2, 2010, if the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.

By April 2, 2010, if the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below 8.5 per cent, by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.

Applicable Compliance Method:

Compliance with the VOC content of the as-applied fountain solution shall be determined by one of the methods in Paragraphs f)(1)c.i. to f)(1)c.iii. below except when Paragraph f)(1)c.iv. below is applicable:

- i. USEPA Method 24 shall be used to determine the VOC content of the as-applied fountain solution;
- ii. If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA Method 24 analytical data for the concentrated materials used to prepare the as-applied fountain solution and the proportions in which they are mixed to make the as-applied fountain solution. The analysis of the concentrated material(s) may be performed by the supplier(s) of those material(s). The analytical data may be derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on USEPA Method 24 results; or
- iii. If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as a MSDS sheet or equivalent information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA Method 24, the data obtained by USEPA Method 24 shall be employed.
- iv. When adding alcohol to a fountain solution batch previously tested in accordance with one of the compliance test methods contained in Paragraphs f)(1)c.i. to f)(1)c.iii. above, in lieu of the Methods in Paragraphs f)(1)c.i. to f)(1)c.iii. above, the permittee shall determine the VOC (alcohol) content of the altered fountain solution using a hydrometer.

A thermometer or other temperature detection device capable of reading to 0.5 degrees Fahrenheit shall be used to ensure that any refrigerated fountain solution reservoirs are maintained at or below 60 degrees Fahrenheit at all times.

d. Emission Limitation:

By April 2, 2010, the permittee shall maintain the as-applied VOC content at or below 70 per cent, by weight for each cleaning solution used for cleaning on the press.

Applicable Compliance Method:

The VOC content of cleaning solutions shall be determined by one of the following methods:



- i. USEPA Method 24 shall be used to determine the VOC content of the cleaning solution;
- ii. If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA Method 24 analytical data for the concentrated materials used to prepare the cleaning solution and the proportions in which they are mixed to make the as-applied cleaning solution. The analysis of the concentrated material(s) may be performed by the supplier(s) of those material(s). The analytical data may be derived from a MSDS or equivalent information from the supplier as long as it is based on USEPA Method 24 results; or
- iii. If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as MSDS sheet or equivalent information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA Method 24, the data obtained by USEPA Method 24 shall be employed.

e. Emission Limitation:

By April 2, 2010, the permittee shall maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 68 degrees Fahrenheit for each cleaning solution used for cleaning on the press.

Applicable Compliance Method:

The VOC composite partial vapor pressure of cleaning solutions shall be determined by one of the following methods:

- i. If diluted prior to use, calculate the VOC composite vapor pressure of the as-applied solvent by using the formula for "VOC composite vapor pressure" as follows:
  - (a) Determine the identity and quantity of each compound in a blended organic solvent by using ASTM D2306, or by using ASTM E260 for organics and ASTM D3792 for water content, if applicable, or the manufacturer's product formulation data.
  - (b) Determine the vapor pressure of each pure VOC component by using ASTM D2879 or publications such as "Perry's Chemical Engineer's Handbook, CRC Handbook of Chemistry and Physics, or Lange's Handbook of Chemistry."
  - (c) Calculate the VOC composite partial pressure of the solvent by using the formula for "VOC composite partial pressure." For the purpose of this calculation, the blended solvent shall be assumed to be an ideal solution where "Raoult's Law" applies. The partial vapor pressures of each compound at 68 degrees Fahrenheit shall be used in the formula. The VOC composite partial pressure shall be calculated as follows:



$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

$W_i$  = Weight of the "i"th VOC compound, in grams.

$W_w$  = Weight of water, in grams.

$W_e$  = Weight of exempt compound, in grams.

$MW_i$  = Molecular weight of the "i"th VOC compound, in grams per gram-mole.

$MW_w$  = Molecular weight of water, in grams per gram-mole.

$MW_e$  = Molecular weight of the "e"th exempt compound, in grams per gram- mole.

$PP_c$  = VOC composite partial vapor pressure at 68 degrees Fahrenheit, in mm Hg.

$VP_i$  = Vapor pressure of the "i"th VOC compound at 68 degrees Fahrenheit, in mm Hg.

- ii. If not diluted prior to use, the permittee shall use formulation information provided by the supplier, such as a MSDS or equivalent information from the supplier as long as it is based on results determined in accordance with the procedure in Paragraph f)(1)e.i. above.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute," ORC Section 3704.03(F)(4)(b), was not necessary because the emissions units' 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 permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is 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 PTIO.



**4. Emissions Unit Group - Group 3: R002, R004, R005,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
R002	Six color, 40 inch Heidelberg offset lithographic printing press with flexographic coater.
R004	Six color, 44 inch Komori offset lithographic printing press with flexographic coater - Komori 6-Color.
R005	Eight color, 40 inch Komori offset lithographic printing press with flexographic coater - Komori 8-Color.

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. Paragraph g)(1) of this permit.

(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 operation(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.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3)	The emissions of volatile organic compounds (VOC) from emissions unit R002 shall not exceed 3050.0 pounds per month and 18.30 tons per year.  The emissions of VOC from emissions unit R004 shall not exceed 2527.0 pounds per month and 15.16 tons per year.  The emissions of VOC from emissions unit R005 shall not exceed 4878.0 pounds per month and 29.27 tons per year.
b.	OAC rule 3745-21-09(Y)(2)(d)	This facility is exempt from OAC rule 3745-21-09(Y)(1) because the total maximum usage of VOC in all coatings



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		and inks employed in all flexographic, packaging rotogravure and publication rotogravure printing lines within the facility is less than or equal to 100 tons per year.
c.	OAC rule 3745-21-22	The permittee shall comply with the following terms and conditions by April 2, 2010: Paragraphs b)(2)a., b)(2)b., c)(2), c)(3), d)(2), d)(3), d)(4), d)(5), e)(1), f)(1)c., f)(1)d., and f)(1)e. of this permit.

(2) Additional Terms and Conditions

- a. By April 2, 2010, the permittee shall meet one of the following requirements for the fountain solution employed on the press:
  - i. If the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight; or
  - ii. If the fountain solution contains alcohol:
    - (a) Maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight; or
    - (b) Maintain the as-applied VOC content of the fountain solution at or below 8.5 per cent, by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.
- b. By April 2, 2010, the permittee shall meet one of the following requirements for each cleaning solution used for cleaning on the press:
  - i. Maintain the as-applied VOC content at or below 70 per cent, by weight; or
  - ii. Maintain the as-applied VOC composite partial vapor pressure at or below 10 millimeters of mercury (mm Hg) at 68 degrees Fahrenheit.
- c. The use of cleaning solutions not meeting the specifications in Paragraphs b)(2)b.i. and b)(2)b.ii. above is permitted provided that the quantity used does not exceed 110 gallons over any consecutive 12 month period.

c) Operational Restrictions

- (1) The used wash rags/shop towels shall be kept in closed containers.
- (2) By April 2, 2010, the permittee shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.



- (3) By April 2, 2010, 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 and maintain the information at the facility for 5 years:
  - a. the company identification for each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - b. the number of gallons or pounds of each coating, ink, fountain solution concentrate, fountain solution additive, and cleanup material employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005, combined;
  - c. the VOC content of each coating, ink, fountain solution concentrate, fountain solution additive and cleanup material, in pounds per gallon or weight fraction employed in emissions units K001, K002, K003, R001, R002, R003, R004 and R005;
  - d. the operating hours of each emissions unit;
  - e. documentation of composite vapor pressure in mm Hg at 68 degrees Fahrenheit for each manual cleanup material where the 50 percent retention factor is used in the emission calculation; and
  - f. the total VOC emission rate for each emissions unit, in pounds per month.

The total VOC emission rate for all coatings, inks, fountain solution concentrates, and fountain solution additives calculated in accordance with Engineering Guide #68.

Cleanup materials will be apportioned to each emissions unit (EU) as follows: R001 through R005 total cleanup emissions will be multiplied by an emissions-unit-weighted usage factor for each emissions unit determined as follows each month:

$$\frac{EU_{R00X} \text{ operation hours } \times EU_{R00X} \text{ capacity in square feet per hour}}{\sum_{R001-R005} (EU_{R00X} \text{ operation hours } \times EU_{R00X} \text{ capacity in square feet per hour})}$$

- (2) By April 2, 2010, the permittee shall measure:
  - a. The VOC (alcohol) content, in accordance with Paragraph f)(1)c.iv. below, of any altered fountain solution, at the time of alteration, in per cent by weight, of the fountain solution employed in the press and shall maintain records of the results of the measurements at the facility for a period of 5 years. 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 per cent; and a standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution.



- b. On a daily basis, the temperature, in degrees Fahrenheit, of the fountain solution, if the permittee refrigerates the fountain solution in accordance with Paragraph b)(2)a.ii.(b) above, and shall maintain records of the results of the measurements at the facility for a period of 5 years.
- (3) By April 2, 2010, the permittee shall maintain records of the following information at the facility for 5 years for each batch of fountain solution prepared for use in the press:
- 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 USEPA 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.
  - e. The date and time the batch was prepared.
- (4) By April 2, 2010, the permittee shall maintain monthly records at the facility for 5 years of the VOC content or VOC composite partial vapor pressure of all cleaning materials employed in all the lithographic and letterpress printing operations.
- (5) By April 2, 2010, the permittee shall maintain monthly records at the facility for 5 years of the following information:
- a. The total amount, in gallons, of all the cleanup materials employed; and
  - b. The total amount, in gallons, of all the cleanup materials employed that exceeds the allowable VOC content or VOC composite vapor pressure.
- e) Reporting Requirements
- (1) Starting on April 2, 2010, the permittee shall notify the appropriate Ohio EPA District Office or local air agency of the following exceedances:
- a. Each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in Paragraphs b)(2)a.i. or b)(2)a.ii above.
  - b. Each temperature reading that shows an exceedance of the temperature limitation specified in Paragraph b)(2)a.ii.(b) above.
  - c. Each calculated VOC content that exceeds the VOC content limitation specified in Paragraph b)(2)a.ii. above.
  - d. Each instance when an exceedance of the alcohol usage restriction as specified for fountain solutions in Paragraph b)(2)a.ii. above.
  - e. Each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in Paragraph b)(2)b. above for cleanup materials occurs.



Each notification shall be submitted to the appropriate Ohio EPA District Office or local air agency within 45 days after the instance occurs, and it shall include a copy of the record showing the instance.

(2) The permittee shall notify the Ohio EPA District Office or local air agency in writing within 30 days following the completion of the first documented achievement of compliance with each of the requirements in Paragraphs (D)(2) through (D)(7) of OAC rule 3745-21-22. The compliance certification under these paragraphs shall provide the following, where applicable:

- a. A description of the requirements;
- b. A description of the records that document continuing compliance;
- c. The results of any compliance tests, including documentation of test data;
- d. The results of any records that document continuing compliance, including calculations; and
- e. A statement by the permittee of the lithographic printing or letterpress printing facility as to whether the offset lithographic printing press or letterpress printing press has complied with the requirement(s).

(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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in Paragraph b)(1) of this permit shall be determined in accordance with the following method(s):

a. Emission Limitations:

The emissions of VOC from emissions unit R002 shall not exceed 3050.0 pounds per month.

The emissions of VOC from emissions unit R004 shall not exceed 2527.0 pounds per month.

The emissions of VOC from emissions unit R005 shall not exceed 4878.0 pounds per month.

Applicable Compliance Method:

Compliance with the monthly allowable VOC emission limitations above shall be demonstrated through record keeping requirements established in Paragraph d)(1) of this permit.



b. Emission Limitation:

The emissions of VOC from emissions unit R002 shall not exceed 18.30 tons per year.

The emissions of VOC from emissions unit R004 shall not exceed 15.16 tons per year.

The emissions of VOC from emissions unit R005 shall not exceed 29.27 tons per year.

Applicable Compliance Method:

The annual allowable VOC emission limitations above were determined by multiplying the monthly allowable VOC emission limitations by 12 months per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the monthly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

c. Emission Limitations:

By April 2, 2010, if the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.

By April 2, 2010, if the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.

By April 2, 2010, if the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below 8.5 per cent, by weight, and refrigerate the fountain solution to 60 degrees Fahrenheit or less.

Applicable Compliance Method:

Compliance with the VOC content of the as-applied fountain solution shall be determined by one of the methods in Paragraphs f)(1)c.i. to f)(1)c.iii. below except when Paragraph f)(1)c.iv. below is applicable:

- i. USEPA Method 24 shall be used to determine the VOC content of the as-applied fountain solution;
- ii. If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA Method 24 analytical data for the concentrated materials used to prepare the as-applied fountain solution and the proportions in which they are mixed to make the as-applied fountain solution. The analysis of the concentrated material(s) may be performed by the supplier(s) of those material(s). The analytical data may be derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on USEPA Method 24 results; or
- iii. If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as a MSDS sheet or equivalent



information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA Method 24, the data obtained by USEPA Method 24 shall be employed.

- iv. When adding alcohol to a fountain solution batch previously tested in accordance with one of the compliance test methods contained in Paragraphs f)(1)c.i. to f)(1)c.iii. above, in lieu of the methods in Paragraphs f)(1)c.i. to f)(1)c.iii. above, the permittee shall determine the VOC (alcohol) content of the altered fountain solution using a hydrometer.

A thermometer or other temperature detection device capable of reading to 0.5 degrees Fahrenheit shall be used to ensure that any refrigerated fountain solution reservoirs are maintained at or below 60 degrees Fahrenheit at all times.

- d. Emission Limitation:

By April 2, 2010, the permittee shall maintain the as-applied VOC content at or below 70 per cent, by weight for each cleaning solution used for cleaning on the press.

Applicable Compliance Method:

The VOC content of cleaning solutions shall be determined by one of the following methods:

- i. USEPA Method 24 shall be used to determine the VOC content of the cleaning solution;
- ii. If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA Method 24 analytical data for the concentrated materials used to prepare the cleaning solution and the proportions in which they are mixed to make the as-applied cleaning solution. The analysis of the concentrated material(s) may be performed by the supplier(s) of those material(s). The analytical data may be derived from a MSDS or equivalent information from the supplier as long as it is based on USEPA Method 24 results; or
- iii. If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as MSDS sheet or equivalent information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA Method 24, the data obtained by USEPA Method 24 shall be employed.

- e. Emission Limitation:

By April 2, 2010, the permittee shall maintain the as-applied VOC composite partial vapor pressure at or below 10 mm Hg at 68 degrees Fahrenheit for each cleaning solution used for cleaning on the press.

Applicable Compliance Method:

The VOC composite partial vapor pressure of cleaning solutions shall be determined by one of the following methods:

- i. If diluted prior to use, calculate the VOC composite vapor pressure of the as-applied solvent by using the formula for "VOC composite vapor pressure" as follows:
- Determine the identity and quantity of each compound in a blended organic solvent by using ASTM D2306, or by using ASTM E260 for organics and ASTM D3792 for water content, if applicable, or the manufacturer's product formulation data.
  - Determine the vapor pressure of each pure VOC component by using ASTM D2879 or publications such as "Perry's Chemical Engineer's Handbook, CRC Handbook of Chemistry and Physics, or Lange's Handbook of Chemistry."
  - Calculate the VOC composite partial pressure of the solvent by using the formula for "VOC composite partial pressure." For the purpose of this calculation, the blended solvent shall be assumed to be an ideal solution where "Raoult's Law" applies. The partial vapor pressures of each compound at 68 degrees Fahrenheit shall be used in the formula. The VOC composite partial pressure shall be calculated as follows:

$$PP_c = \sum_{i=1}^n \frac{\frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

$W_i$  = Weight of the "i"th VOC compound, in grams.

$W_w$  = Weight of water, in grams.

$W_e$  = Weight of exempt compound, in grams.

$MW_i$  = Molecular weight of the "i"th VOC compound, in grams per gram-mole.

$MW_w$  = Molecular weight of water, in grams per gram-mole.

$MW_e$  = Molecular weight of the "e"th exempt compound, in grams per gram- mole.

$PP_c$  = VOC composite partial vapor pressure at 68 degrees Fahrenheit, in mm Hg.

$VP_i$  = Vapor pressure of the "i"th VOC compound at 68 degrees Fahrenheit, in mm Hg.

- ii. If not diluted prior to use, the permittee shall use formulation information provided by the supplier, such as a MSDS or equivalent information from the supplier as long as it is based on results determined in accordance with the procedure in f)(1)e.i. above.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number:** P0105631

**Facility ID:** 1652100108

**Effective Date:** 11/17/2009

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute," ORC Section 3704.03(F)(4)(b), was not necessary because the emissions units' 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 permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is 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 PTIO.