



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

3/4/2013

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1652100108
Permit Number: P0111830
Permit Type: Initial Installation
County: Medina

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) 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. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: ARAQMD



FINAL

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

Facility ID:	1652100108
Permit Number:	P0111830
Permit Type:	Initial Installation
Issued:	3/4/2013
Effective:	3/4/2013
Expiration:	8/12/2018



**Division of Air Pollution Control
Permit-to-Install and Operate**

for
Rohrer Corporation

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Final Permit-to-Install and Operate
Rohrer Corporation
Permit Number: P0111830
Facility ID: 1652100108
Effective Date: 3/4/2013

Authorization

Facility ID: 1652100108
Application Number(s): A0045989
Permit Number: P0111830
Permit Description: Installation of emissions unit R006, a new Komori 40-inch, 6-color, non-heatset, sheetfed, lithographic printing press with a flexographic coater, replacing an existing press, emissions unit R004.
Permit Type: Initial Installation
Permit Fee: \$200.00
Issue Date: 3/4/2013
Effective Date: 3/4/2013
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 Environmental Protection Agency (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


Scott J. Nally
Director



Final Permit-to-Install and Operate
Rohrer Corporation
Permit Number: P0111830
Facility ID: 1652100108
Effective Date: 3/4/2013

Authorization (continued)

Permit Number: P0111830
Permit Description: Installation of emissions unit R006, a new Komori 40-inch, 6-color, non-heatset, sheetfed, lithographic printing press with a flexographic coater, replacing an existing press, emissions unit R004.

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

Emissions Unit ID:	R006
Company Equipment ID:	Komori 6-Color
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Rohrer Corporation
Permit Number: P0111830
Facility ID: 1652100108
Effective Date: 3/4/2013

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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 submitting¹ 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 emissions 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.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



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.

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.



Final Permit-to-Install and Operate
Rohrer Corporation
Permit Number: P0111830
Facility ID: 1652100108
Effective Date: 3/4/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Rohrer Corporation

Permit Number: P0111830

Facility ID: 1652100108

Effective Date: 3/4/2013

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.



Final Permit-to-Install and Operate
Rohrer Corporation
Permit Number: P0111830
Facility ID: 1652100108
Effective Date: 3/4/2013

C. Emissions Unit Terms and Conditions



1. R006, Komori 6-Color

Operations, Property and/or Equipment Description:

New Komori 6-color, 40-inch sheet-fed, non-heatset lithographic printing press with a flexographic coater, using no emissions control. Per the application, installation of emissions unit R006 is a direct replacement of an existing press, emissions unit R004, and will result in an overall decrease in facility potential volatile organic compound (VOC) emissions, thus maintaining this facility as a natural minor source of VOC emissions. The solvents in the inks, coatings and cleanup materials used in emissions unit K006 are primarily isopropyl alcohol (isopropanol), a VOC and non hazardous air pollutant (HAP). Thus, this facility will remain a non major source of HAP after replacement of emissions unit R004 with emissions unit R006.

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. None.

(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 are identified below. 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)	Volatile organic compound (VOC) emissions shall not exceed 2770 pounds per month and 16.62 tons per year.
b.	OAC rule 3745-21-09(Y)(2)(b)	The requirements of paragraph (Y)(1) of this rule shall not apply to any printing line which is located at a facility in which the total maximum usage of coatings and inks in all flexographic, packaging rotogravure and publication rotogravure printing lines is less than or equal to one hundredforty-eight tons per year; except as otherwise provided under paragraph



Final Permit-to-Install and Operate

Rohrer Corporation

Permit Number: P0111830

Facility ID: 1652100108

Effective Date: 3/4/2013

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		(Y)(3) of this rule.
c.	OAC rule 3745-21-09(Y)(2)(d)	The requirements of paragraph (Y)(1) of this rule shall not apply to any printing line which is located at a facility in which 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 one hundred tons per year, except as otherwise provided under paragraph (Y)(3) of this rule.
d.	OAC rule 3745-21-09(Y)(3)	Once the requirements of paragraph (Y)(1) of this rule apply to a facility or a flexographic, packaging rotogravure and publication rotogravure printing line within the facility, the facility is not eligible for an exemption under paragraphs (Y)(2)(b) and (Y)(2)(d) of this rule.
e.	OAC rule 3745-21-22	<p>Per OAC rule 3745-21-22(A), the requirements of paragraphs (B) to (J) of this rule shall apply to each lithographic printing or letterpress printing facility that meets all the following criteria:</p> <p>(1) The facility is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county; and</p> <p>(2) The facility employs letterpress printing or one or more of the following types of offset lithographic printing processes: heatset web, non-heatset web or sheet-fed; and</p> <p>(3) The facility has total actual VOC emissions, before the application of control systems and devices, from all lithographic and/or letterpress printing operations (including emissions from cleaning solutions used on lithographic and/or letterpress printing presses and fountain solutions) equal to or greater than three tons of VOCs per rolling twelve-month period.</p> <p>Per OAC rule 3745-21-22(E)(1) The</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall comply with the requirements of this rule no later than the following dates:</p> <p>(a) For any subject offset lithographic or letterpress printing press for which installation commenced before April 2, 2009, the compliance date for the press is twelve months from April 2, 2009.</p> <p>(b) For any subject offset lithographic or letterpress printing press for which installation commenced on or after the effective date of this rule, the compliance date for the press is the initial startup date of the press.</p> <p>See b)(2)(c) through (g) below for applicable <i>VOC emissions control requirements</i> of this rule.</p>

(2) Additional Terms and Conditions

- a. The VOC emissions limits established pursuant to OAC rule 3745-31-05(A)(3) reflect the potential to emit for this emissions unit. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.
- b. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final permit-to-install and operate (PTIO) prior to making any change to equipment, change in coatings or inks and/or cleanup materials employed, change in the method of operation, or any other change to the emissions unit that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.
- c. Per OAC rule 3745-21-22(D)(3), any person who owns or operates a subject sheet-fed offset lithographic printing press shall meet one of the following requirements for the fountain solution used on that 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.
 - 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 sixty degrees Fahrenheit or less.
 - d. Per OAC rule 3745-21-22(D)(5), where it can be demonstrated to the satisfaction of the director that a subject offset lithographic printing press cannot be operated with fountain solutions meeting the limits in paragraph (D)(2), (D)(3), or (D)(4) of this rule for reasons of technological and/or economic feasibility the permitting authority may establish site-specific limits based upon evidence of technological or economic infeasibility subject to approval by USEPA as a state implementation plan revision.
 - e. Per OAC rule 3745-21-22(D)(6), any person who owns or operates a subject offset lithographic or letterpress printing press shall meet one of the following requirements for each cleaning solution used for cleaning on that press:
 - i. Maintain the as-applied VOC content at or below seventy per cent, by weight; or
 - ii. Maintain the as-applied VOC composite partial vapor pressure at or below ten mm Hg at twenty degrees Celsius (sixty-eight degrees Fahrenheit).

The use of cleaning solutions not meeting the specifications of paragraphs (D)(6)(a) and (D)(6)(b) of this rule is permitted provided that the quantity used does not exceed one hundred ten gallons over any consecutive twelve-month period.
 - f. Per OAC rule 3745-21-22(D)(7), any person who owns or operates a subject offset lithographic or letterpress printing press shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.
 - g. Per OAC rule 3745-21-22(D)(8), any person who owns or operates a subject offset lithographic or letterpress printing press shall keep all solvent-laden towels in closed containers when not being used.
- c) **Operational Restrictions**
- (1) Prior to the use of any coating in this coating line, the permittee shall determine that the coating meets the toxic screening criteria described below.

Purpose: The purpose of this test is to evaluate coatings to determine if the chemical compounds in the coatings would be emitted at acceptable levels for this permit.

Data Needed: (1) MSDS sheet for each coating to be evaluated. (2) information on the maximum coating usage rate for the line as discussed in Step 1 below.



Step 1. Using the following factors, calculate the maximum coating usage rate in terms of gallons per hour:

- a. Assume the coating line operates at its maximum speed while still making usable product.
- b. Assume the coating line is operating at its largest coating laydown rate. This would typically be accomplished by assuming the coating line is painting the largest part available.

Step 2. Review the material safety data sheet (MSDS) for the coating. Note each chemical compound listed, its TLV and the percent by weight of the chemical compound in the coating.

Step 3. Determine if any of the chemical compounds listed in the MSDS are also listed in the following table. If any of the chemical compounds are listed in the table, then calculate the maximum annual emission of that compound by multiplying the maximumcoating usage rate times the percent by weight of each chemical compound. Then multiply the result by 8760 hours per year. The result will be in pounds per year.

Check to see if the calculated emission rate is less than the allowable emission rate found in the below table. If all of the compounds emitted have a maximum annual emission of less than the allowed rate, then move on to step 4. If any of the compounds are emitted at a rate higher than the allowed emission rate, then contact your appropriate District Office or local air agency contact to determine if you can use the coating.

Chemical Compound	CAS	Molecular Weight (MW)	Allowed Emission Rate (lb/year)
arsenic compounds, as As	7440-38-2	74.92	1.70
benzene	71-43-2	78.11	1100
benzidine	92-87-5	184.23	5.60
benzo(a)pyrene	50-32-8	252.30	6.90
beryllium (and Be compounds)	7440-41-7	9.01	0.350
cadmium	7440-43-9	112.4	5.20
chromium	7440-47-3	varies	0.690
hexachlorobenzine (HCB)	118-74-1	289.78	35.0
mercury (and Hg compounds)	7439-97-6	200.59	0.1
nickel (Ni subsulfide)	12035-72-2	240.19	17.0
polychlorinateddibenzo-p-dioxins	1746-01-6	varies	0.030
polychlorinateddibenzofurans	132-64-9	varies	0.030
polychlorinated biphenyls (PCBs, aroclors)	1336-36-3	varies	87.0
vinyl chloride	75-01-4	62.50	2000

Step 4. Find all of the chemical compounds in the coating that have a listed American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV). For each chemical compound with a listed TLV (other than those in the above table),



calculate the maximum short-term emission rate by multiplying the maximum coating usage rate times the percent by weight of each chemical compound. The result should be in terms of pounds of the chemical compound per hour.

Step 5. Determine if the compound will be emitted at or below the acceptable rate. This is done by searching the following table for the chemical compound's TLV and then determining the maximum allowed emission rate listed in the below table. (Note. If the TLV is listed as ppm, then convert the TLV to $\mu\text{g}/\text{m}^3$ by using the following formula: $(\text{TLV in ppm}) \times (\text{MW}) \times (1000) / 24.45 = \text{TLV in } \mu\text{g}/\text{m}^3$; where MW is the molecular weight of the compound.) This table lists the allowable emission rates for compounds with a TLV between the high range and low range. Compare the maximum calculated short-term emission rate of each chemical compound to the allowed emission rate in the table. If the maximum emission rate is less than the allowed emission rate, then the chemical compound is emitted at an acceptable rate.

TLV Range ($\mu\text{g}/\text{m}^3$) (The TLV must be less than the high value listed and greater than or equal to the low value listed)	Allowed Emission Rate (lb/hr)
-----------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------

15	1	0.000067
30	15	0.0010
60	30	0.0020
120	60	0.0040
240	120	0.0080
480	240	0.0160
960	480	0.0320
1,920	960	0.0640
3,840	1,920	0.128
7,680	3,840	0.256
15,360	7,680	0.512
30,720	15,360	1.02
61,440	30,720	2.05
122,880	61,440	4.10
245,760	122,880	8.19
491,520	245,760	16.4
983,040	491,520	32.8
1,966,080	983,040	65.5
3,932,160	1,966,080	131

Step 6. Check each chemical compound that has a listed TLV. If all compounds are emitted at a rate less than the allowed emission rate, then the coating passes the toxic screening test and can be used under this permit. If one or more of the chemical compounds are emitted at a rate greater than the allowed emission rate, then you should contact your appropriate District Office or local air agency contact to determine if you can use the coating.



d) **Monitoring and/or Recordkeeping Requirements**

- (1) Per OAC rule 3745-21-22(G)(2), the owner or operator of a heatset web or sheet-fed offset lithographic printing press subject to the requirements of paragraph (D)(2)(b) or (D)(3)(b) of this rule shall measure:
 - a. The VOC (alcohol) content, in accordance with paragraph (F)(2)(d) of this rule, of any altered fountain solution, at the time of alteration, in per cent byweight, 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 five 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 owner or operator refrigerates the fountain solution in accordance with paragraph (D)(2)(b)(ii) or (D)(3)(b)(ii) of this rule, and shall maintain records of the results of the measurements at the facility for a period of five years.
- (2) Per OAC rule 3745-21-22(G)(3), the owner or operator of a subject offset lithographic printing press shall maintain records, for a period of five years, of one of the following for fountain solution preparation:
 - a. For an owner or operator maintaining a recipe log for each batch of fountain solution prepared for use in the press:
 - i. A recipe log that identifies all recipes used to prepare the as-applied fountain solution. Each recipe shall be maintained in the recipe log for a period of five years from the date the recipe was last prepared for a press. Each recipe shall clearly identify the following:
 - (a) 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 proportions in which the fountain solution is mixed, including the addition of alcohol and/or water. The proportion may be identified as a volume when preparing a discrete batch or may be identified as the settings when an automatic mixing unit is employed.
 - (c) The calculated VOC content of the final, mixed recipe.
 - ii. Identification of the recipe used to prepare each batch of fountain solution for use in the press.
 - iii. The date and time when the batch was prepared.
 - iv. An affirmation the batch was prepared in accordance with the recipe.



- b. For an owner or operator not maintaining a recipe log in accordance with paragraph (G)(3)(a) of this rule, for each batch of fountain solution prepared for use in the press:
 - i. 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.
 - ii. The volume of alcohol added to make the batch of fountain solution.
 - iii. The volume of water added to make the batch of fountain solution.
 - iv. The calculated VOC content of the final, mixed batch.
 - v. The date and time the batch was prepared.

For purposes of paragraphs (G)(3)(a) and (G)(3)(b) of this rule, a fountain solution that is continuously blended with an automatic mixing unit is considered to be the same batch until such time that the recipe or mix ratio is changed.

- (3) Per OAC rule 3745-21-22(G)(4), the owner or operator of a subject offset lithographic or letterpress printing press shall maintain records, for a period of five years, of one of the following for all cleaning solutions employed in all the offset lithographic and letterpress printing operations:

- a. For an owner or operator maintaining a recipe log for each batch of cleaning solution prepared:
 - i. A recipe log that identifies all recipes used to prepare the as-applied cleaning solution. Each recipe shall be maintained in the recipe log for a period of five years from the date the recipe was last prepared. Each recipe shall clearly identify the following:
 - (a) The VOC content of each cleaning solution, based upon the manufacturer's laboratory analysis using USEPA method 24; or
 - (b) The VOC composite partial vapor pressure of each cleaning solution, based upon the method under paragraph (F)(5) of this rule.
 - ii. Identification of the recipe used to prepare each batch of cleaning solution.
 - iii. The date and time when the batch was prepared.
 - iv. An affirmation the batch was prepared in accordance with the recipe.
- b. For an owner or operator not maintaining a recipe log in accordance with paragraph (G)(5)(a) of this rule, for each batch of cleaning solution prepared, records of the VOC content or VOC composite partial vapor pressure and the date and time the batch was prepared.



- (4) Per OAC rule 3745-21-22(G)(5), the owner or operator of a subject offset lithographic or letterpress printing press shall maintain monthly records of the following information:
 - a. The total amount, in gallons, of all the cleaning solutions employed; and
 - b. The total amount, in gallons, of all the cleaning solutions employed that exceeds the allowable VOC content or VOC composite vapor pressure.
 - (5) The permittee shall collect and record the results of any toxic screening evaluations done per c)(1).
- e) Reporting Requirements
- (1) Per OAC rule 3745-21-22(H), *Reporting requirements for the monitoring and record keeping information*, the owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall notify the director of any of the following exceedances of applicable requirements. Each notification shall be submitted to the director within forty-five days after the instance occurs, and it shall include a copy of the record showing the instance.
 - a. If determining alcohol content via hydrometer measurement, each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in paragraph (D)(2)(a), (D)(2)(b), (D)(3)(a), or (D)(3)(b) of this rule.
 - b. If complying via refrigerated fountain solution, each temperature reading that shows an exceedance of the temperature limitation specified in paragraph (D)(2)(b) or (D)(3)(b) of this rule.
 - c. Each calculated VOC content that exceeds the VOC content limitation specified in paragraph (D)(2)(b), (D)(3)(b), or (D)(4) of this rule.
 - d. Each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in paragraph (D)(6) of this rule for cleaning solutions occurs.
 - e. All three-hour blocks of time during which the average combustion temperature within the thermal oxidizer was below the temperature limitation specified in paragraph (G)(1)(b) of this rule.
 - f. All three-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed was below the temperature limitations specified paragraph (G)(1)(c) of this rule.
 - (2) Per OAC rule 3745-21-22(J)(2), the owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule and that has an offset lithographic or letterpress printing press with an initial startup date on or after April 2, 2009 of this rule shall notify the Ohio environmental protection agency district office or local air agency in writing that the offset lithographic or letterpress printing press is subject to this rule. The notification, which shall be submitted not later than either the date of initial startup of the



offset lithographic or letterpress printing press, or sixty days after April 2, 2009 (whichever is later), shall provide the information listed under paragraph (J)(1) of this rule. The application for an installation permit under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

- (3) Per OAC rule 3745-21-22(J)(3), the owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall notify the Ohio environmental protection agency district office or local air agency in writing within thirty days following the completion of any of the following requirements:
 - a. For an offset lithographic or letterpress printing press subject to the VOC emission requirements in paragraphs (D)(2) to (D)(8) of this rule, the first documented achievement of compliance with each of the requirements;
 - b. The compliance certification under paragraph (J)(3)(a) of this rule shall provide the following, where applicable:
 - i. A description of the requirements;
 - ii. A description of the VOC emission control system;
 - iii. A description of the monitoring devices;
 - iv. A description of the records that document continuing compliance;
 - v. The results of any compliance tests, including documentation of test data;
 - vi. The results of any records that document continuing compliance, including calculations; and
 - vii. A statement by the owner or operator of the offset lithographic or letterpress printing facility as to whether the offset lithographic or letterpress printing press has complied with the requirement(s).
 - (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The annual PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit. It is recommended that the annual PER be submitted electronically through the Ohio EPA's "e-Business Center: Air Services", although PERs can be submitted via U.S. postal service or can be hand delivered.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitations:

Volatile organic compound (VOC) emissions shall not exceed 2770 pounds per month and 16.62 tons per year.

Applicable Compliance Method:

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

b. Emission Limitations:

Per OAC rule 3745-21-22(D)(3),

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, byweight.

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; or

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 sixty degrees Fahrenheit or less.

Applicable Compliance Method:

Per OAC rule 3745-21-22(F)(2), For any offset lithographic printing press that is subject to the requirements of paragraph (D)(2), (D)(3), or (D)(4) of this rule, compliance with the VOC content of the as-applied fountain solution shall be determined by one of the methods in paragraphs (F)(2)(a) to (F)(2)(c) of this rule except when paragraph (F)(2)(d) is applicable:

(F)(2)(a): USEPA method 24 shall be used to determine the VOC content of the as-applied fountain solution;

(F)(2)(b): 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

(F)(2)(c): 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.

(F)(2)(d): For any offset lithographic printing press that is subject to the requirements of paragraph (D)(2)(b) or (D)(3)(b) of this rule, when adding alcohol to a fountain solution batch previously tested in accordance with one of the compliance test methods contained in paragraphs (F)(2)(a) to (F)(2)(c) of this rule, in lieu of the methods in paragraphs (F)(2)(a) to (F)(2)(c) of this rule, the owner or operator 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.

c. Emission Limitations:

Per OAC rule 3745-21-22(D)(6),

Maintain the as-applied VOC content at or below seventy per cent, by weight; or

Maintain the as-applied VOC composite partial vapor pressure at or below ten mm Hg at twenty degrees Celsius (sixty-eight degrees Fahrenheit).

Applicable Compliance Method:

Per OAC rule 3745-21-22(F)(4), For any offset lithographic or letterpress printing press that is subject to the requirements of paragraph (D)(6)(a) of this rule, the VOC content of cleaning solutions shall be determined by one of the following methods:

USEPA method 24 shall be used to determine the VOC content of the cleaning solution;

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 material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on USEPA method 24 results; or

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.

Per OAC rule 3745-21-22(F)(5), For any offset lithographic or letterpress printing press that is subject to the requirements of paragraph (D)(6)(b) of this rule, the



VOC composite partial vapor pressure of cleaning solutions shall be determined by one of the methods identified in (F)(5)(a) and (F)(5)(b) of this rule.

- (2) Per OAC rule 3745-21-22(I), For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors shall be used:
 - a. A portion of the VOC contained in inks and cleaning solution is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:
 - i. A ninety-five per cent VOC retention factor shall be used for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning five per cent of the VOC in the ink is emitted during the printing process.
 - ii. A fifty per cent 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 ten mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning fifty per cent of the VOC used on the shop towels is emitted during the cleaning process.
 - g) Miscellaneous Requirements
 - (1) None.