



11/3/2014

Certified Mail

Mr. Gregory Tremonti
NORTH TOLEDO GRAPHICS LLC
5225 TELEGRAPH RD.
Toledo, OH 43612

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0448010300
Permit Number: P0116824
Permit Type: Renewal
County: Lucas

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/survey.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 Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: TDES



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
NORTH TOLEDO GRAPHICS LLC**

Facility ID:	0448010300
Permit Number:	P0116824
Permit Type:	Renewal
Issued:	11/3/2014
Effective:	11/3/2014
Expiration:	11/3/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
NORTH TOLEDO GRAPHICS LLC

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Final Permit-to-Install and Operate
NORTH TOLEDO GRAPHICS LLC
Permit Number: P0116824
Facility ID: 0448010300
Effective Date: 11/3/2014

Authorization

Facility ID: 0448010300
Application Number(s): A0050709, A0050870, A0050871, A0050872, A0050874, A0051495, A0051496
Permit Number: P0116824
Permit Description: FEPTIO renewal permit for four heatset web offset printing presses (K002, K005, K007, and K009) with dryers controlled by a regenerative thermal oxidizer.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 11/3/2014
Effective Date: 11/3/2014
Expiration Date: 11/3/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

NORTH TOLEDO GRAPHICS LLC
5225 TELEGRAPH ROAD
Toledo, OH 43612

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

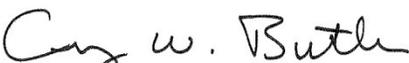
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

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


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0116824
Permit Description: FEPTIO renewal permit for four heatset web offset printing presses (K002, K005, K007, and K009) with dryers controlled by a regenerative thermal oxidizer.

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

Emissions Unit ID:	K002
Company Equipment ID:	K002
Superseded Permit Number:	P0108260
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	K005
Company Equipment ID:	K005
Superseded Permit Number:	P0088115
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	K007
Company Equipment ID:	K007
Superseded Permit Number:	P0088115
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	K009
Company Equipment ID:	Line 9
Superseded Permit Number:	P0115206
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
NORTH TOLEDO GRAPHICS LLC
Permit Number: P0116824
Facility ID: 0448010300
Effective Date: 11/3/2014

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 of this permit 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 [DO/LAA] 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.

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
NORTH TOLEDO GRAPHICS LLC
Permit Number: P0116824
Facility ID: 0448010300
Effective Date: 11/3/2014

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) B.2., B.3., and B.7.
2. The combined facility-wide emissions of hazardous air pollutants (HAPs) from all emission units at this facility shall not exceed 9.9 tons per year individual HAP and 24.9 tons per year of any combination of HAPs, based upon a rolling, 12-month summation of the monthly emissions. The combined emissions of HAPs shall include the following emission units: K002, K005, K007, and K009.
 - a) The permittee shall collect and record the following information for each month for all emissions units located at this facility:
 - (1) the company identification for each material employed (i.e. printing ink, fountain solution, clean-up material);
 - (2) the number of pounds of each ink employed, and the number of gallons of fountain solution and clean-up material employed;
 - (3) the combined HAP content of each ink employed in percent by weight and of each fountain solution and clean-up material employed in pounds per gallon;
 - (4) the individual HAP content of each ink in percent by weight and of each fountain solution and clean-up material, in pounds per gallon;
 - (5) the facility-wide rolling, 12-month summation of combined HAP emissions from all emissions units located at this facility, in tons, calculated by adding the current month's combined HAP emissions to the combined HAP emissions for the preceding eleven calendar months, in tons per year; and
 - (6) the facility-wide rolling, 12-month summation of individual HAP emissions from all emissions units located at this facility, in tons, calculated by adding the current month's individual HAP emissions to the individual HAP emissions for the preceding eleven calendar months, in tons per year.

[Note: The coating information must be for the coatings as employed, including thinning solvents added at the emissions unit.]
3. The permittee shall submit quarterly deviation (excursion) reports that identify all deviations (excursions) of the following emission limitations, operational restrictions and/or control device



operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

- a) an identification of each month during which the combined facility-wide emissions of any individual HAP exceeded 9.9 tons per rolling 12-month period, and the actual 12-month summation of any such HAP emissions for each such month; and
- b) an identification of each month during which the combined facility-wide emissions of combined HAPs exceeded 24.9 tons per rolling, 12-month period, and the actual 12-month summation of any such HAP emissions for each such month.

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

4. The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
5. The permittee shall identify in the annual permit evaluation report the following information concerning the operations during the 12-month reporting period for emissions units K002, K005, K007, and K009:
 - c) an identification of all months during which the combined facility-wide emissions of any individual HAP exceeded 9.9 tons per rolling 12-month period, and the actual 12-month summation of any such HAP emissions for each such month; and
 - d) an identification of all months during which the combined facility-wide emissions of combined HAPs exceeded 24.9 tons per rolling, 12-month period, and the actual 12-month summation of any such HAP emissions for each such month.
6. All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.



7. Compliance with the Emissions Limitations and/or Control Requirements specified in section B.2. of these terms and conditions shall be determined in accordance with the following methods:

a) Emission Limitation:

The combined emissions from all emissions units at the facility shall not exceed 9.9 tons per rolling, 12-month period for any single HAP and 24.9 tons per rolling, 12-month period for any combination of HAPs.

Applicable Compliance Method:

The monitoring and record keeping requirements specified in B.2. shall be used to demonstrate compliance.



Final Permit-to-Install and Operate
NORTH TOLEDO GRAPHICS LLC
Permit Number: P0116824
Facility ID: 0448010300
Effective Date: 11/3/2014

C. Emissions Unit Terms and Conditions



1. K002

Operations, Property and/or Equipment Description:

Line 2 Heatset offset web lithographic printing line

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. d)(9).

(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. b)(1)b., b)(2)a. through b)(2)g., d)(2) through d)(8), e)(1), f)(1)b. through f)(1)g., and f)(2).

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
Line 2 Heatset Offset Web Lithographic Printing Press		
a.	ORC 3704.03(T)	See b)(2)a. through b)(2)f.
b.	OAC rule 3745-31-05(D)	See b)(2)a. through b)(2)g.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.70 pound per hour.
e.	OAC rule 3745-21-07(M)(3)(c), (c)(vi)	Exemption from applicability of OAC rules 3745-21-07(M)(3)(a) and (M)(3)(b).
Combustion product emissions from (2) 1.725 mmBtu/hr natural gas-fired dryers. Press Units F & G, Dryers 1 & 2		
f.	OAC rule 3745-31-05(A)(3) as effective 11/30/01	Carbon monoxide (CO) emissions shall not exceed 0.106 ton per month averaged



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>over a 12-month rolling period.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.124 ton per month averaged over a 12-month rolling period.</p> <p>PE shall not exceed 0.004 ton per month averaged over a 12-month rolling period.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.004 ton per month averaged over a 12-month rolling period.</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 0.0075 ton per month averaged over a 12-month rolling period.</p> <p>See b)(2).h. and b)(2)i.</p>
g.	OAC rule 3745-31-05(A)(3)(a)(ii) as effective 12/1/2006	See b)(2)j.
h.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
i.	OAC rule 3745-17-10(B)(1)	PE from the stack shall not exceed 0.020 pound per million Btu of actual heat input.
j.	OAC rule 3745-18-06(B)	Exemption for units with a maximum rated heat capacity of less than or equal to 10 mmBTU per hour heat input.

(2) Additional Terms and Conditions

- a. The permittee shall maintain the dryer air pressure lower than the pressroom air pressure at all times the press is operating.
- b. The dryer shall be vented to a regenerative thermal oxidizer (RTO) that shall reduce VOC emissions by at least ninety-five percent or maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C₆H₁₄) on a dry basis, whichever is less stringent.



- c. The permittee shall meet i. or ii. below for the fountain solution used:
 - 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, and use no alcohol in the fountain solution.
 - ii. if the fountain solution contains alcohol:
 - (a) maintain the as-applied VOC content of the fountain solution at or below 1.6 per cent, by weight; or
 - (b) maintain the as-applied VOC content of the fountain solution at or below 3.0 per cent, by weight, and refrigerate the fountain solution to sixty degrees Fahrenheit or less.
- d. The permittee shall meet i. or ii. below for each cleaning solution used for cleaning on the press:
 - i. Maintain the as-applied VOC content at or below seventy percent, 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 d.i. and d.ii.is permitted provided that the quantity used does not exceed one hundred ten gallons over any consecutive twelve-month period.

- e. The permittee shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.
- f. The permittee shall keep all solvent-laden shop towels in closed containers when not being used.
- g. Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

These emission limitations were established for PTI purposes to avoid major source applicability with additional recordkeeping and/or reporting requirements as included in Part B. Facility-wide Terms and Conditions, B.2.

- h. The hourly and annual CO, NO_x, PE, SO₂ and VOC emissions limits were established to reflect the potential to emit for this emissions unit while combusting natural gas. Therefore, as long as only natural gas is utilized as fuel it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emissions limitations.
- i. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001,



in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants emitted at less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limits/control measures no longer apply.

The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)f., and f)(1)i. through f)(1)m.

- j. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO_x, PE, SO₂ and VOC emissions from the drying oven burners since the uncontrolled potential to emit for CO, NO_x, PE, SO₂ and VOC is less than 10 tons per year.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain a record of any period of time during which the emissions from the dryer were not vented to an incinerator while the emissions unit is in operation.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.
- (4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit,



whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of no less than 5 years.

(5) If the fountain solution contains alcohol:

- a. the permittee shall measure the VOC (alcohol) content, in accordance with OAC rule 3745-21-22(F)(2)(d), of any altered fountain solution, at the time of alteration, in percent by weight, of the fountain solution employed in the press. 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; and
- b. if the permittee refrigerates the fountain solution to comply with the option of b)(2)c.ii.(b), the permittee shall measure on a daily basis, the temperature, in degrees Fahrenheit, of the fountain solution. 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 sixty degrees Fahrenheit at all times.

These records shall be maintained at the facility for a period of no less than 5 years.

(6) The permittee shall maintain records of one of the following for fountain solution preparation:

- a. when 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; and
 - (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; and
 - iv. an affirmation the batch was prepared in accordance with the recipe.

OR

- b. when not maintaining a recipe log, 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; and
 - v. the date and time the batch was prepared.

These records shall be maintained at the facility for a period of no less than 5 years.

For purposes of compliance with d)(6), 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.

- (7) The permittee shall maintain records of one of the following for all cleaning solutions employed:
 - a. when 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 OAC rule 3745-21-22(F)(5).
- ii. identification of the recipe used to prepare each batch of cleaning solution;
 - iii. the date and time when the batch was prepared; and
 - iv. an affirmation the batch was prepared in accordance with the recipe.

OR

- b. when not maintaining a recipe log, for each batch of cleaning solution prepared,
 - i. records of the VOC content or VOC composite partial vapor pressure; and
 - ii. the date and time the batch was prepared.

These records shall be maintained at the facility for a period of no less than 5 years.

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

e) Reporting Requirements

- (1) The permittee shall submit quarterly summaries of the following records:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:



- i. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
- ii. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
- iii. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s);
- iv. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;
- v. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
- vi. each incident of deviation described in "iv." or "v." (above) where a prompt investigation was not conducted;
- vii. each incident of deviation described in "iv." or "v." where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;
- viii. each incident of deviation described in "iv." or "v." where proper records were not maintained for the investigation and/or the corrective action(s);
- ix. if determining fountain solution alcohol content via hydrometer measurement, each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in b)(2)c.;
- x. if complying via refrigerated fountain solution, each temperature reading that shows an exceedance of the temperature limitation specified in b)(2)c.ii.(b).;
- xi. each calculated fountain solution VOC content that exceeds the VOC content limitation specified in b)(2)c.ii.; and
- xii. each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in b)(2)d. for cleaning solutions occurs and a copy of each such record.



- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following in the annual permit evaluation report:
 - a. each day when a fuel other than natural gas was burned in this emissions unit.
- (4) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

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 Limitation:**

Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.



Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

- b. VOC emissions shall be reduced by ninety-five percent or maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C_6H_{14}) on a dry basis, whichever is less stringent.

Applicable Compliance Method:

If required, Methods 1 thru 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A and the procedures outlined in OAC rule 3745-21-10(C) shall be used to demonstrate compliance. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C) and OAC rule 3745-21-22(F)(1)(a) through (F)(1)(c) or an alternative test protocol approved by the Ohio EPA.. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration of the potential presence of interfering gases.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- c. Emission Limitation:

VOC content limitation of the as-applied fountain solution specified in b)(2)c.,

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance according to the procedure specified in OAC rule 3745-21-22(F)(2)(a) through (d) or an alternative test protocol approved by the Ohio EPA..

- d. Emission Limitation:

VOC content of cleaning solution limitation specified in b)(2)d.i.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance according to the procedure specified in OAC rule 3745-21-22(F)(4)(a) through (c) or an alternative test protocol approved by the Ohio EPA.

- e. Emission Limitation:

VOC composite partial vapor pressure of cleaning solution limitation specified in b)(2)d.ii.



Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the procedures specified under OAC rule 3745-21-22(F)(5) or an alternative test protocol approved by the Ohio EPA.

f. Emission Limitation:

The permittee shall maintain the dryer air pressure lower than the pressroom air pressure at all times the press is operating.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using an airflow direction indicator, such as a smoke stick or aluminum ribbons, or differential pressure gauge.

g. Emission limitation:

Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

Applicable compliance method:

Compliance shall be demonstrated through monitoring and record keeping requirements of B.2. of this permit.

h. Emission Limitation:

PE from the printing press stack shall not exceed 0.70 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

CO emissions from the dryers shall not exceed 0.106 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the



emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 3.45 mmBtu per hour and multiply by 8,760 hours per year and divide by 2,000 lb/ton.

Take the CO emissions (1.27 tons/yr) and divide by 12 months per year to determine the tons of CO emissions averaged over a rolling, 12-month period.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

j. Emission Limitation:

NOx emissions from the dryers shall not exceed 0.124 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 3.45 mmBtu per hour and multiply by 8,760 hours per year and divide by 2,000 lb/ton.

Take the NOx emissions (1.49 tons/yr) and divide by 12 months per year to determine the tons of NOx emissions averaged over a rolling, 12-month period.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

k. Emission Limitation:

Particulate emissions from the dryers shall not exceed 0.004 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat



input capacity of 3.45 mmBtu per hour and multiply by 8,760 hours per year and divide by 2,000 lb/ton.

Take the particulate emissions (0.05 ton/yr) and divide by 12 months per year to determine the tons of particulate emissions averaged over a rolling, 12-month period.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

I. Emission Limitation:

SO₂ emissions from the dryers shall not exceed 0.004 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO₂ emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 3.45 mmBtu per hour and multiply by 8,760 hours per year and divide by 2,000 lb/ton.

Take the SO₂ emissions (0.05 ton/yr) and divide by 12 months per year to determine the tons of SO₂ emissions averaged over a rolling, 12-month period.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

m. Emission Limitation:

VOC emissions from the dryers shall not exceed 0.0075 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the



maximum heat input capacity of 3.45 mmBtu per hour and multiply by 8,760 hours per year and divide by 2,000 lb/ton.

Take the VOC emissions (0.09 ton/yr) and divide by 12 months per year to determine the tons of SO₂ emissions averaged over a rolling, 12-month period.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

n. Emission Limitation:

Particulate emissions from the dryers shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emissions limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

- (2) The permittee shall conduct, or have conducted, emission testing for this regenerative thermal oxidizer controlling emissions from this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months prior to permit expiration. Additional testing may be required consistent with Ohio EPA DAPC Engineering Guide #16 or by request of the Ohio EPA or Toledo Division of Environmental Services.
 - b. The emission testing shall be conducted to demonstrate compliance with:
 - i. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system).
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s):
 - i. Methods 1-4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A for stack emissions and destruction efficiency in accordance with the



test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Samples shall be taken simultaneously at the inlet and outlet of the vapor control system.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while all of the emissions units served by the stack (K002, K005, and K007) are operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency. The test report shall include the average combustion temperature within the thermal oxidizer for each test run.

g) Miscellaneous Requirements

- (1) None.



2. K005

Operations, Property and/or Equipment Description:

Line 5 heatset offset web lithographic printing line

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

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

a. b)(1)f., d)(6) through d)(9) and e)(2).

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

a. b)(1)b., b)(2)b., b)(2)c., c)(2), d)(2) through d)(5), e)(1), f)(1)b. through f)(1)d., and f)(2).

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
	Line 5 Rockwell C450 heatset offset lithographic printing press	
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01432 issued 4/25/2006)	Organic compound (OC) emissions shall not exceed 9.16 pounds per hour. See b)(2)a.
b.	OAC rule 3745-31-05(D)	OC emissions shall not exceed 18.32 tons per rolling, 12-month period. See b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.551 pound per hour
e.	OAC rule 3745-21-07(M)(3)(c),	Exemption from applicability of OAC rules



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(c)(vi)	3745-21-07(M)(3)(a) and (M)(3)(b).
f.	ORC 3704.03(F)(4)(b) OAC rule 3745-114-01	See d)(6) through d)(9)
Combustion product emissions from Line 5 natural gas, indirect-fired dryer with (1)1.92 mmBtu/hr burner		
g.	OAC rule 3745-31-05(A)(3) (PTI 04-01432 issued 4/25/2006)	<p>Carbon monoxide (CO) emissions shall not exceed 0.16 pound per hour and 0.70 ton per year.</p> <p>Nitrogen oxide (NOx) emissions shall not exceed 0.19 pound per hour and 0.83 ton per year.</p> <p>PE shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.001 pound per hour and 0.01 ton per year.</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>See b)(2)d.</p>
i.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
j.	OAC rule 3745-17-10(B)(1)	PE from the stack shall not exceed 0.020 pound per million BTU of actual heat input.
k.	OAC rule 3745-18-06(B)	Exemption for units with a maximum rated heat capacity of less than or equal to 10 mmBTU per hour heat input.
Combustion product emissions from 4.0 mmBtu/hr regenerative thermal oxidizer serving as control for emissions units K002, K005, and K007		
l.	OAC rule 3745-31-05(A)(3) (PTI 04-01432 issued 4/25/2006)	<p>CO emissions shall not exceed 0.33 pound per hour and 1.4 tons per year.</p> <p>NOx emissions shall not exceed 0.39</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		pound per hour and 1.7 tons per year. PE shall not exceed 0.01 pound per hour and 0.04 ton per year. SO ₂ emissions shall not exceed 0.002 pound per hour and 0.01 ton per year. VOC emissions shall not exceed 0.02 pound per hour and 0.09 ton per year. Visible emissions from the stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.
m.	OAC rule 3745-17-07(A)(1)	See b)(2)e.
n.	OAC rule 3745-17-11(B)(1)	See b)(2)e.
o.	OAC rule 3745-18-06(B)	Exemption for units with a maximum rated heat capacity of less than or equal to 10 mmBTU per hour heat input.

(2) Additional Terms and Conditions

- a. Compliance with the requirements of this rule includes compliance with the requirements established under OAC rule 3745-31-05(D).
- b. The dryer emissions shall be vented to a regenerative thermal oxidizer with a minimum VOC destruction efficiency of 95% by weight at all times this emissions unit is in operation.
- c. Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

These emission limitations were established for PTI purposes to avoid major source applicability with additional recordkeeping and/or reporting requirements as included in Part B. Facility-wide Terms and Conditions, B.2.

- d. The hourly and annual CO, NO_x, PE, SO₂ and VOC emissions limits were established to reflect the potential to emit for this emissions unit while combusting natural gas. Therefore, as long as only natural gas is utilized as fuel it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emissions limitations.



- e. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as fuel in this emissions unit.
- (2) The permittee shall employ coatings and materials as specified below, based on a volume-weighted average:

Printing inks: maximum of 70,833 lbs/month, with a maximum of 40% VOC by weight.

Fountain solution: maximum of 233.3 gals/month, at a maximum of 9% VOC by volume.

Clean-up Material: maximum of 216.7 gals/month, at a maximum of 97% VOC by volume.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain a record of any period of time during which the emissions from the dryer were not vented to an incinerator while the emissions unit is in operation.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.
- (4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion



- b. temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
- c. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of no less than 5 years.

- (5) The permittee shall collect and record the following information for each month for the printing line:
 - a. the company identification for each material employed (i.e. printing ink, fountain solution, clean-up material);
 - b. the number of pounds of each ink employed, and the number of gallons of fountain solution and cleanup material employed;
 - c. the organic compound content of each ink in percent by weight and of each fountain solution and cleanup material, in pounds per gallon;
 - d. the total combined organic compound emission rate in pounds per month for stack and fugitive emissions based on actual material usage recorded under d)(5)b. and d)(5)c. and using the calculation methods outlined in f)(1)c.;
 - e. the total controlled organic compound emission for stack and fugitive emissions per rolling 12-month period.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit.]

- (6) The Permit to Install (PTI) application for this emissions unit, K005, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit 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 from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



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

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

- 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:

Toxic Contaminant: Petroleum Distillate

TLV (mg/m3): 525,000

Maximum Hourly Emission Rate (lbs/hr): 4.78

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 30.04

MAGLC (ug/m3): 12,500

Toxic Contaminant: Ethylene Glycol n-Butyl Ether

TLV (mg/m3): 125,000

Maximum Hourly Emission Rate (lbs/hr): 0.56

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 10.22

MAGLC (ug/m3): 2,980

Toxic Contaminant: Cumene

TLV (mg/m3): 246,000

Maximum Hourly Emission Rate (lbs/hr): 0.17

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 102.2

MAGLC (ug/m3): 5,857

Toxic Contaminant: Trimethylbenzenes

TLV (mg/m3): 123,000

Maximum Hourly Emission Rate (lbs/hr): 2.18

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 1,380

MAGLC (ug/m3): 2,930



Toxic Contaminant: Aliphatic Naphtha
TLV (mg/m3): 423,000
Maximum Hourly Emission Rate (lbs/hr): 3.05
Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 1,943
MAGLC (ug/m3): 10,071

The permittee, has demonstrated that emissions of the above air toxics, from emissions unit K005, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI 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.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled



(the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

- b. the Maximum Acceptable Ground Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground level concentration that demonstrated the emissions unit to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly summaries of the following records:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. all monthly records which show that the material usage or composition exceeds the limitations specified in c)(2);
 - ii. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
 - iii. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
 - iv. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s);



- v. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;
 - vi. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
 - vii. each incident of deviation described in "v." or "vi." (above) where a prompt investigation was not conducted;
 - viii. each incident of deviation described in "v." or "vi." where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - ix. each incident of deviation described in "v." or "vi." where proper records were not maintained for the investigation and/or the corrective action(s).
- b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) 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 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall identify the following in the annual permit evaluation report:
 - a. each day when a fuel other than natural gas was burned in this emissions unit.



- (5) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

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 Limitation:

Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Visible particulate emissions from the thermal oxidizer stack shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

The dryer emissions shall be vented to a regenerative thermal oxidizer with a minimum VOC destruction efficiency of 95% by weight.

Applicable Compliance Method:

If required, Methods 1 thru 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A and the procedures outlined in OAC rule 3745-21-10(C) shall be used to demonstrate compliance. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected



shall be based on a consideration of the diversity of the organic species present and their total concentration of the potential presence of interfering gases.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

Organic compound emissions from the printing press shall not exceed 9.16 pounds per hour.

Applicable compliance method:

This emission limitation was based on the maximum combined stack and fugitive emissions from ink, fountain solution and cleanup solvent using the calculation method specified in following Ohio EPA Engineering Guide #56 dated June 15, 1999.

Stack emissions, S, (lbs/hr) from the printing process:

$$S = (1 - DRE)[0.8 (P) + A_d (FS) + B_d (CS)]$$

Fugitive emissions, F, (lbs/hr) from printing process are:

$$F = A_f(FS) + B_f (CS)$$

where:

DRE = destruction or removal efficiency of control device, expressed as a decimal

P = (ink usage, lbs/hr) X (ink VOC content, % by weight)

FS = (fountain solution usage rate, gal/hr) X (fountain solution VOC content, lbs VOC/gal)

CS = (cleanup solvent usage rate, gal/hr) X (cleanup solvent VOC content, lbs VOC/gal)

A_d = mass fraction of fountain solution VOC routed to dryer and control device;

$$A_d = 0.7$$

B_d = mass fraction of cleanup solvent routed to dryer and control device;

$$B_d = 0.0$$

A_f = mass fraction of fountain solution VOC emitted as fugitive;

$$A_f = 0.3$$

B_f = mass fraction of cleanup solvent emitted as fugitive;



$B_f = 0.5$ (if solvent vapor pressure < 10 mm Hg at 20 deg. C (68 deg. F) and used rags are stored in closed containers)

If required, the permittee shall demonstrate compliance with this emission limitation through the use of the following to be used in the above Engineering Guide #56 calculation:

- i. the procedures in f)(1)b. shall be used to determine the actual destruction efficiency;
- ii. Method 24 and 24A of 40 CFR Part 60, Appendix A shall be used to determine the VOC content of the ink, fountain solution and cleanup solvent used during the test; and
- iii. the actual usage rate of ink, fountain solution and cleanup solvent shall be recorded during the test.

The sum of the hourly stack emissions (as calculated by Engineering Guide #56) shall be added to the hourly fugitive emissions (as calculated by Engineering Guide #56) to obtain the total hourly emissions from this emissions unit.

d. Emission Limitation:

Organic compound emissions from the printing press shall not exceed 18.32 tons per year.

Applicable Compliance Method:

This emission limitation was based on the combined stack and fugitive emissions using the calculation contained in Engineering Guide #56, the operational restrictions contained in c)(2) and the 95% destruction efficiency requirement. Compliance with the Operational Restrictions in c)(2) and the 95% destruction efficiency requirement serves as adequate demonstration of compliance with the annual emission limitation.

e. Emission Limitation:

inks, with a maximum OC content of 40% by weight;
fountain solution, with a maximum OC content of 9% by volume; and
clean-up material, with a maximum OC content of 97% by volume

Applicable Compliance Method:

If required, U.S. EPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to Section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the U.S. EPA and shall use formulation data for that coating or ink to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.



f. Emission limitation:

Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

Applicable compliance method:

Compliance shall be demonstrated through monitoring and record keeping requirements of B.2. of this permit.

g. Emission Limitation:

PE from the printing press stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

CO emissions from the dryer shall not exceed 0.16 pound per hour.

Applicable Compliance Method:

Divide the AP-42 (7/98 Edition) emission factor of 84 pounds of CO emissions per million cubic feet by an average natural gas higher heating value of 1,020 Btu per standard cubic feet natural gas and then multiply that product by 1.92 million Btu per hour (the dryer burner size) or use Method 10 of 40 CFR Part 60, Appendix A.

i. Emission Limitation:

CO emissions from the dryer shall not exceed 0.70 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.16 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

j. Emission Limitation:

NOx emissions from the dryer shall not exceed 0.19 pound per hour.

Applicable Compliance Method:



Divide the AP-42 (10/96 Edition) emission factor of 100 pounds of NOx emissions per million cubic feet by an average natural gas higher heating value of 1,020 Btu per standard cubic feet natural gas and then multiply that product by 1.92 million Btu per hour (the dryer burner size) or use Method 7 of 40 CFR Part 60, Appendix A.

k. Emission Limitation:

NOx emissions from the dryer shall not exceed 0.83 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.19 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

l. Emission Limitation:

PE from the dryer shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Divide the AP-42 (7/98 Edition) emission factor of 1.9 pounds of particulate emissions per million cubic feet by an average natural gas higher heating value of 1,020 Btu per standard cubic feet natural gas and then multiply that product by 1.92 million Btu per hour (the dryer burner size) or use OAC rule 3745-17-03(B)(9).

m. Emission Limitation:

PE from the dryer shall not exceed 0.04 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

n. Emission Limitation:

Particulate emissions from the dryer shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emissions limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the



emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

o. Emission Limitation:

SO₂ emissions from the dryer shall not exceed 0.001 pound per hour.

Applicable Compliance Method:

Divide the AP-42 (10/96 Edition) emission factor of 0.6 pounds of SO₂ emissions per million cubic feet by an average natural gas higher heating value of 1,020 Btu per standard cubic feet natural gas and then multiply that product by 1.92 million Btu per hour (the dryer burner size) or use OAC rule 3745-18-04(F).

p. Emission Limitation:

SO₂ emissions from the dryer shall not exceed 0.01 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.001 pound of SO₂ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

q. Emission Limitation:

VOC emissions from the dryer shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 1.92 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.



r. Emission Limitation:

VOC emissions from the dryer shall not exceed 0.04 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.01 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

s. Emission Limitation:

CO emissions from the thermal oxidizer shall not exceed 0.33 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply the result by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

t. Emission Limitation:

CO emissions from the thermal oxidizer shall not exceed 1.4 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.33 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

u. Emission Limitation:

NOx emissions from the thermal oxidizer shall not exceed 0.39 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per million standard cubic feet



by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 7 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

v. Emission Limitation:

NOx emissions from the thermal oxidizer shall not exceed 1.7 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.39 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

w. Emission Limitation:

Particulate emissions from the thermal oxidizer shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

x. Emission Limitation:

Particulate emissions from the thermal oxidizer shall not exceed 0.04 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.



y. Emission Limitation:

SO₂ emissions from the thermal oxidizer shall not exceed 0.002 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pounds of SO₂ emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

z. Emission Limitation:

SO₂ emissions from the thermal oxidizer shall not exceed 0.01 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.002 pound of SO₂ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

aa. Emission Limitation:

VOC emissions from the thermal oxidizer shall not exceed 0.02 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.



bb. Emission Limitation:

VOC emissions from the thermal oxidizer shall not exceed 0.09 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.02 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

- (2) The permittee shall conduct, or have conducted, emission testing for this regenerative thermal oxidizer controlling emissions from this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months prior to permit expiration. Additional testing may be required consistent with Ohio EPA DAPC Engineering Guide #16 or by request of the Ohio EPA or Toledo Division of Environmental Services.
 - b. The emission testing shall be conducted to demonstrate compliance with:
 - i. the allowable mass emission rate for OC stack emissions from the printing process in pounds per hour; and
 - ii. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system).
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s):
 - i. Methods 1-4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A for stack emissions and destruction efficiency in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Samples shall be taken simultaneously at the inlet and outlet of the vapor control system.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while all of the emissions units served by the stack (K002, K005, and K007) are operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the



proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency. The test report shall include the average combustion temperature within the thermal oxidizer for each test run.

g) Miscellaneous Requirements

- (1) None.



3. K007

Operations, Property and/or Equipment Description:

Line 7 - Goss C450 heatset offset web lithographic printing line

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)f., d)(6) thru (9), and e)(2).
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)b., b)(2)b., b)(2)c., c)(2), d)(2) through d)(5), e)(1), f)(1)b. through f)(1)i., and f)(2).
- 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
Line 7 Goss C450 heatset offset web printing press		
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01235 issued 4/25/2006)	Stack organic compound (OC) emissions shall not exceed 2.4 lbs/hr. Fugitive OC emissions shall not exceed 1.69lbs/hr. See b)(2)a.
b.	OAC rule 3745-31-05(D) (PTI 04-01235 issued 4/25/2006)	Stack OC emissions shall not exceed 7.19 tons per rolling 12-month period. Fugitive OC emissions shall not exceed 5.1 tons per rolling 12-month period. See b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
e.	OAC rule 3745-21-07(M)(3)(c), (c)(vi)	Exemption from applicability of OAC rules 3745-21-07(M)(3)(a) and (M)(3)(b).
f.	ORC 3704.03(F)(4)(d) OAC rule 3745-114-01	See d)(6) through d)(9)
Combustion product emissions from Line 7 natural gas, indirect-fired dryer with 4.6 mmBtu/hr burner		
g.	OAC rule 3745-31-05(A)(3) (PTI 04-01235 issued 4/25/2006)	<p>Carbon Monoxide (CO) emissions shall not exceed 0.38 pound per hour and 1.7 tons per year.</p> <p>Nitrogen Oxide (NOx) emissions shall not exceed 0.45 pound per hour and 2.0 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 0.01 pound per hour and 0.04 ton per year.</p> <p>Sulfur Dioxide (SO₂) emissions shall not exceed 0.002 pound per hour and 0.01 ton year.</p> <p>VOC emissions shall not exceed 0.03 pound per hour and 0.1 ton per year.</p> <p>Visible emissions from the stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.</p> <p>See b)(2)e.</p>
h.	OAC rule 3745-17-07(A)(1)	See b)(2)d.
i.	OAC rule 3745-17-10(B)(1)	PE from the stack shall not exceed 0.020 pound per million Btu of actual heat input.
j.	OAC rule 3745-18-06(B)	Exemption for units with a maximum rated heat capacity of less than or equal to 10 mmBTU per hour heat input.
Combustion product emissions from 4.0 mmBtu/hr regenerative thermal oxidizer serving as control for emissions units K002, K005, and K007		
k.	OAC rule 3745-31-05(A)(3)	CO emissions shall not exceed 0.33



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(PTI 04-01432 issued 4/25/2006)	pound per hour and 1.4 tons per year. NOx emissions shall not exceed 0.39 pound per hour and 1.7 tons per year. PE shall not exceed 0.01 pound per hour and 0.04 ton per year. SO ₂ emissions shall not exceed 0.002 pound per hour and 0.01 ton per year. VOC emissions shall not exceed 0.02 pound per hour and 0.09 ton per year. Visible emissions from the stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.
i.	OAC rule 3745-17-07(A)(1)	See b)(2)d.
m.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
n.	OAC rule 3745-18-06(B)	Exemption for units with a maximum rated heat capacity of less than or equal to 10 mmBTU per hour heat input.

(2) Additional Terms and Conditions

- a. Compliance with the requirements of this rule includes compliance with the requirements established under OAC rule 3745-31-05(D).
- b. Stack emissions shall be vented to a thermal oxidizer with a minimum OC destruction efficiency of 95% and an overall (stack + fugitive) control efficiency of 85%.
- c. Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

These emission limitations were established for PTI purposes to avoid major source applicability with additional recordkeeping and/or reporting requirements as included in Part B. Facility-wide Terms and Conditions, B.2.

- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).



- e. The hourly and annual CO, NO_x, PE, SO₂ and VOC emissions limits were established to reflect the potential to emit for this emissions unit while combusting natural gas. Therefore, as long as only natural gas is utilized as fuel it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emissions limitations.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as fuel in this emissions unit.
- (2) The maximum annual coating and cleanup material usage for this emissions unit shall not exceed the following levels, based upon a rolling, 12-month summation of the coating and cleanup material usage figures:

Printing inks: 850,000 pounds per year, with a maximum OC content of 42.11% by weight.

Fountain solution: 3,200 gallons per year, with a maximum OC content of 0.54 lbs/gal.

Clean-up material: 2,900 gallons per year, with a maximum OC content of 6.6 lbs/gal.

Compliance with the annual coating usage limitation shall be based upon a rolling, 12-month summation of the coating and cleanup material usage figures.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain a record of any period of time during which the emissions from the dryer were not vented to an incinerator while the emissions unit is in operation.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.
- (4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications



deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of no less than 5 years.

- (5) The permittee shall collect and record the following information for each month for the printing line:
 - a. the company identification for each material employed (i.e. printing ink, fountain solution, clean-up material);
 - b. the number of pounds of each ink employed, and the number of gallons of fountain solution and cleanup material employed;
 - c. the organic compound content of each ink in percent by weight and of each fountain solution and cleanup material, in pounds per gallon;
 - d. the total combined organic compound emission rate in pounds per month for stack and fugitive emissions based on actual material usage recorded under d)(5)b. and d)(5)c. and using the calculation methods outlined in f)(1)b. and f)(1)d.;
 - e. the total controlled organic compound emission for stack and fugitive emissions per rolling 12-month period.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit.]

- (6) The Permit to Install (PTI) application for this emissions unit, K007, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit 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 from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:



- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, 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 used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Aliphatic Solvent Naptha
TLV (mg/m3): 572.6 (stoddard solvent)
Maximum Hourly Emission Rate (lbs/hr): 1.2
Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 11.25
MAGLC (ug/m3): 13,600

The permittee, has demonstrated that emissions of Aliphatic Solvent Naptha, from emissions unit K007, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour "maximum ground level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can



affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI 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.

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



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

e) Reporting Requirements

- (1) The permittee shall submit quarterly summaries of the following records:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. all monthly records which show that the material usage or composition exceeds the limitations specified in c)(2);
 - ii. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
 - iii. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
 - iv. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s);
 - v. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;
 - vi. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
 - vii. each incident of deviation described in "v." or "vi." (above) where a prompt investigation was not conducted;
 - viii. each incident of deviation described in "v." or "vi." where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - ix. each incident of deviation described in "v." or "vi." where proper records were not maintained for the investigation and/or the corrective action(s).



- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) 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 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall identify the following in the annual permit evaluation report:
 - a. each day when a fuel other than natural gas was burned in this emissions unit.
- (5) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.



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 Limitation:

Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Visible particulate emissions from the thermal oxidizer stack and the dryer stack shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

Stack OC emissions shall not exceed 2.4 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission rate may be demonstrated by the following calculation from Ohio EPA Engineering Guide #56.

Stack emissions, S, (lbs/hr) from the printing process:

$$S = (1 - DRE)[0.8 (P) + A_d (FS) + B_d (CS)]$$

where:

DRE = destruction or removal efficiency of control device, expressed as a decimal = 0.95

P = (ink usage, lbs/hr) X (ink VOC content, % by weight)

$$P = (850,000 \text{ lb}/6000 \text{ hr})(0.4211) = 59.66 \text{ lb VOC/hr}$$

Maximum hourly usage is based on maximum annual usage divided by 6000 hours per year of operation.

FS = (fountain solution usage rate, gal/hr) X (fountain solution VOC content, lbs VOC/gal)

$$FS = (3200 \text{ gal}/6000 \text{ hr})(0.54) = 0.29 \text{ lb VOC/hr}$$

Maximum hourly usage is based on maximum annual usage divided by 6000 hours per year of operation.

CS = (cleanup solvent usage rate, gal/hr) X (cleanup solvent VOC content, lbs VOC/gal)



$$CS = (2900 \text{ gal}/6000 \text{ hr})(6.60 \text{ lb}/\text{gal}) = 3.2 \text{ lb VOC}/\text{hr}$$

Maximum hourly usage is based on maximum annual usage divided by 6000 hours per year of operation.

A_d = mass fraction of fountain solution VOC routed to dryer and control device;
 $A_d = 0.7$

B_d = mass fraction of cleanup solvent routed to dryer and control device;
 $B_d = 0.0$

Then:

$$S = (1-0.95)[0.8(59.66) + 0.7(0.29) + 0.0(3.2)] = 2.4 \text{ lb VOC}/\text{hr}$$

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 25 or 25A, as appropriate. Compliance is demonstrated if the actual emissions rate from all emissions units during the test is less than the combined allowable emissions from all emissions units in operation during the test. Alternative U.S. EPA approved test methods may be used with prior written approval from Ohio EPA.

c. Emission Limitation:

Stack OC emissions from the printing process shall not exceed 7.19 tons per rolling 12-month period

Applicable Compliance Method:

The annual OC emission limitation is based on the operational restrictions contained in c)(2). Compliance with the hourly emission limitation and the operational restrictions contained in c)(2) shall serve as demonstration of compliance with the annual emission limitation.

d. Emission Limitation:

Fugitive OC emissions shall not exceed 1.69 lbs per hour

Applicable Compliance Method:

Compliance with the hourly emission rate may be demonstrated by the following calculation from Ohio EPA Engineering Guide #56.

Fugitive emissions, F, (lbs/hr) from printing process are:

$$F = A_f(FS) + B_f(CS)$$

where:

FS = (fountain solution usage rate, gal/hr) X (fountain solution VOC content, lbs VOC/gal)



$$FS = (3200 \text{ gal}/6000 \text{ hr})(0.54) = 0.29 \text{ lb VOC/hr}$$

CS = (cleanup solvent usage rate, gal/hr) X (cleanup solvent VOC content, lbs VOC/gal)

$$CS = (2900 \text{ gal}/6000 \text{ hr})(6.60 \text{ lb/gal}) = 3.2 \text{ lb VOC/hr}$$

A_f = mass fraction of fountain solution VOC emitted as fugitive;

$$A_f = 0.3$$

B_f = mass fraction of cleanup solvent emitted as fugitive;

$B_f = 0.5$ (if solvent vapor pressure < 10 mm Hg at 20 deg. C (68 deg. F) and used rags are stored in closed containers)

Then:

$$F = 0.3(0.29) + 0.5(3.2) = 1.69 \text{ lb VOC/hr}$$

e. Emission Limitation:

Fugitive OC emissions shall not exceed 5.1 tons/yr

Applicable Compliance Method:

The annual OC emission limitation is based on the hourly emission limitation (1.69 lbs/hr) multiplied by 6,000 hours per year and divided by 2000 pounds per ton. The operational restrictions contained in c)(2) are based on the maximum hourly usage rates for 6,000 hours per year. Compliance with the usage restrictions in c)(2) and the destruction efficiency in b)(2)b. shall serve as demonstration of compliance with the annual emission limitation.

f. Emission Limitation:

inks, with a maximum OC content of 42.11% by weight;
fountain solution, with a maximum OC content of 0.54 lbs/gal; and
clean-up material, with a maximum OC content of 6.6 lbs/gal

Applicable Compliance Method:

If required, U.S. EPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to Section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the U.S. EPA and shall use formulation data for that coating or ink to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

g. Emission Limitation:

Stack emissions from the printing process shall be vented to a thermal oxidizer with a minimum OC destruction efficiency of 95%.



Applicable Compliance Method:

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Samples shall be taken simultaneously at the inlet and outlet of the vapor control system.

h. Emission Limitation:

85 % minimum overall (stack + fugitive) control efficiency

Applicable Compliance Method:

Compliance shall be determined through the following material balance calculation: Subtract the controlled emissions rate from the uncontrolled emission rate. Divide this difference by the uncontrolled emission rate and multiply by 100%.

The maximum uncontrolled organic compound emission rate is the sum of the maximum ink, fountain solution and cleanup solvent usage rates $[(850,000 \text{ lbs/yr} \times 0.4211) / 6000 \text{ hrs/yr}] + [(3200 \text{ gal/yr} \times 0.54 \text{ lb/gal}) / 6000 \text{ hrs/yr}] + [(2900 \text{ gal/yr} \times 6.6 \text{ lbs/gal}) / 6000 \text{ hrs/yr}] = 63.15 \text{ lbs/hr}$.

The maximum controlled emission rate is the sum of the maximum hourly stack emissions and fugitive emissions $[2.4 \text{ lbs/hr} + 1.69 \text{ lbs/hr} = 4.09 \text{ lbs/hr}]$.

$$(63.15 \text{ lbs/hr} - 4.09 \text{ lbs/hr}) / (63.15 \text{ lbs/hr}) \times 100\% = 94\%$$

i. Emission limitation:

Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

Applicable compliance method:

Compliance shall be demonstrated through monitoring and record keeping requirements of B.2. of this permit.

j. Emission Limitation:

CO emissions from the dryer shall not exceed 0.38 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air



Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply the result by the maximum heat input capacity of 4.6 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

k. Emission Limitation:

CO emissions from the dryer shall not exceed 1.7 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.38 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

l. Emission Limitation:

NOx emissions from the dryer shall not exceed 0.45 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4.6 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 7 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

m. Emission Limitation:

NOx emissions from the dryer shall not exceed 2.0 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.45 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.



n. Emission Limitation:

Particulate emissions from the dryer shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4.6 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

o. Emission Limitation:

Particulate emissions from the dryer shall not exceed 0.04 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

p. Emission Limitation:

Particulate emissions from the dryer shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emissions limitation was developed based on emission factors specified in USEPA reference document AP 42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.



q. Emission Limitation:

SO₂ emissions from the dryer shall not exceed 0.002 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pounds of SO₂ emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4.6 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

r. Emission Limitation:

SO₂ emissions from the dryer shall not exceed 0.01 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.002 pound of SO₂ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

s. Emission Limitation:

VOC emissions from the dryer shall not exceed 0.03 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4.6 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.



t. Emission Limitation:

VOC emissions from the dryer shall not exceed 0.1 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.03 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

u. Emission Limitation:

CO emissions from the thermal oxidizer shall not exceed 0.33 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply the result by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

v. Emission Limitation:

CO emissions from the thermal oxidizer shall not exceed 1.4 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.33 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

w. Emission Limitation:

NOx emissions from the thermal oxidizer shall not exceed 0.39 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per million standard cubic feet



by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 7 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

x. Emission Limitation:

NOx emissions from the thermal oxidizer shall not exceed 1.7 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.39 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

y. Emission Limitation:

Particulate emissions from the thermal oxidizer shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

z. Emission Limitation:

Particulate emissions from the thermal oxidizer shall not exceed 0.04 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.



aa. Emission Limitation:

SO₂ emissions from the thermal oxidizer shall not exceed 0.002 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pounds of SO₂ emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

bb. Emission Limitation:

SO₂ emissions from the thermal oxidizer shall not exceed 0.01 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.002 pound of SO₂ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

cc. Emission Limitation:

VOC emissions from the thermal oxidizer shall not exceed 0.02 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 4 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.



dd. Emission Limitation:

VOC emissions from the thermal oxidizer shall not exceed 0.09 ton per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.02 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

- (2) The permittee shall conduct, or have conducted, emission testing for this regenerative thermal oxidizer controlling emissions from this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months prior to permit expiration. Additional testing may be required consistent with Ohio EPA DAPC Engineering Guide #16 or by request of the Ohio EPA or Toledo Division of Environmental Services.
 - b. The emission testing shall be conducted to demonstrate compliance with:
 - i. the allowable mass emission rate for OC stack emissions from the printing process in pounds per hour; and
 - ii. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system).
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s):
 - i. Methods 1-4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A for stack emissions and destruction efficiency in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Samples shall be taken simultaneously at the inlet and outlet of the vapor control system.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while all of the emissions units served by the stack (K002, K005, and K007) are operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the



proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency. The test report shall include the average combustion temperature within the thermal oxidizer for each test run.

g) Miscellaneous Requirements

- (1) None.



4. K009, Line 9

Operations, Property and/or Equipment Description:

Line 9 Heatset Offset Web Lithographic Printing Press and two 1.35 mmBtu/hr natural gas dryers with integrated incinerator

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

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

a. b)(1)f., d)(9) through d)(12), and e)(2)

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

a. b)(1)b., b)(2)a. through b)(2)g., c)(2), d)(2) through d)(8), e)(1), and f)(1)b. through f)(1)h.

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
Line 9 Heatset Offset Web Lithographic Printing Press		
a.	ORC 3704.03(T)	Volatile organic compounds (VOC) emissions shall not exceed 1.075 tons per month averaged over a 12-month rolling period. See b)(2)a.
b.	OAC rule 3745-31-05(D)	See b)(2)a. through b)(2)g.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the stack shall not exceed 0.551 pound per hour.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-21-07(M)(3)(c), (c)(vi)	Exemption from applicability of OAC rules 3745-21-07(M)(3)(a) and (M)(3)(b).
f.	ORC 3704.03(F)(4)(b) OAC rule 3745-114-01	See d)(9) through d)(12).

(2) Additional Terms and Conditions

- a. The permittee shall vent the emissions from the dryer to an incinerator at all times during which the emissions unit is in operation.
- b. Any incinerator utilized to comply with these emissions limitations shall reduce VOC emissions by at least ninety-five percent or maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C₆H₁₄) on a dry basis, whichever is less stringent.
- c. The permittee shall meet i. or ii. below for the fountain solution used:
 - 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, and use no alcohol in the fountain solution.
 - ii. if the fountain solution contains alcohol:
 - (a) maintain the as-applied VOC content of the fountain solution at or below 1.6 per cent, by weight; or
 - (b) maintain the as-applied VOC content of the fountain solution at or below 3.0 per cent, by weight, and refrigerate the fountain solution to sixty degrees Fahrenheit or less.
- d. The permittee shall meet i. or ii. below for each cleaning solution used for cleaning on the press:
 - i. Maintain the as-applied VOC content at or below seventy percent, 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 d.i. and d.ii. is permitted provided that the quantity used does not exceed one hundred ten gallons over any consecutive twelve-month period.
- e. The permittee shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.



- f. The permittee shall keep all solvent-laden shop towels in closed containers when not being used.
- g. Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

These emission limitations were established for PTI purposes to avoid major source applicability with additional recordkeeping and/or reporting requirements as included in Part B. Facility-wide Terms and Conditions, B.2.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as fuel in this emissions unit.
- (2) The permittee shall maintain the dryer air pressure lower than the pressroom air pressure at all times the press is operating.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain a record of any period of time during which the emissions from the dryer were not vented to an incinerator while the emissions unit is in operation.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.
- (4) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit



below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of no less than 5 years.

(5) If the fountain solution contains alcohol:

- a. the permittee shall measure the VOC (alcohol) content, in accordance with OAC rule 3745-21-22(F)(2)(d), of any altered fountain solution, at the time of alteration, in percent by weight, of the fountain solution employed in the press. 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; and
- b. if the permittee refrigerates the fountain solution to comply with the option of b)(2)c.ii.(b), the permittee shall measure on a daily basis, the temperature, in degrees Fahrenheit, of the fountain solution. 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 sixty degrees Fahrenheit at all times.

These records shall be maintained at the facility for a period of no less than 5 years.

(6) The permittee shall maintain records of one of the following for fountain solution preparation:

- a. when 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; and
 - (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; and
- iv. an affirmation the batch was prepared in accordance with the recipe.

OR

- b. when not maintaining a recipe log, 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; and
 - v. the date and time the batch was prepared.

These records shall be maintained at the facility for a period of no less than 5 years.

For purposes of compliance with d)(6), 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.

- (7) The permittee shall maintain records of one of the following for all cleaning solutions employed:
 - a. when 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 OAC rule 3745-21-22(F)(5).
 - ii. identification of the recipe used to prepare each batch of cleaning solution;
 - iii. the date and time when the batch was prepared; and



- iv. an affirmation the batch was prepared in accordance with the recipe.

OR

- b. when not maintaining a recipe log, for each batch of cleaning solution prepared,
 - i. records of the VOC content or VOC composite partial vapor pressure; and
 - ii. the date and time the batch was prepared.

These records shall be maintained at the facility for a period of no less than 5 years.

- (8) The permittee 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.
- (9) The Permit to Install (PTI) application for this emissions unit, K009, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit 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 from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the 'American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV



- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, 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 used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the result of dispersion modeling for worst case contaminant (emitted at 1 or more tons/year).

Toxic Contaminant: Trimethylbenzenes
TLV (µg/m³): 123,000
Maximum Hourly Emission Rate (lbs/hr): 1.2
Predicted 1-Hour Maximum Ground Level Concentration (µg/m³): 48.14
MAGLC (µg/m³): 2,930

The permittee, has demonstrated that emissions of the above air toxics, from emissions unit K009, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

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

If the permittee determines that the “Toxic Air Contaminant Statute” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a



“modification”, the permittee shall apply for and obtain a final PTI 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.

- (11) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F):
- a. description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground level concentration that demonstrated the emissions unit to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit or the materials applied.
- (12) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), through the predicted 1-hour maximum ground level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) The permittee shall submit quarterly summaries of the following records:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. any period of time during which the emissions from the dryer were not vented to an incinerator while the emissions unit was in operation;



- ii. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
 - iii. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
 - iv. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s);
 - v. if determining fountain solution alcohol content via hydrometer measurement, each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in b)(2)c.;
 - vi. if complying via refrigerated fountain solution, each temperature reading that shows an exceedance of the temperature limitation specified in b)(2)c.ii.(b).;
 - vii. each calculated fountain solution VOC content that exceeds the VOC content limitation specified in b)(2)c.ii.; and
 - viii. each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in b)(2)d. for cleaning solutions occurs and a copy of each such record.
- b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) 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 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.



- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
 - (4) The permittee shall identify the following in the annual permit evaluation report:
 - a. each day when a fuel other than natural gas was burned in this emissions unit.
 - (5) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- 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 Limitation:**

Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).
 - b. **Emission Limitation:**

VOC emissions from the printing press operation shall not exceed 1.075 tons per month averaged over a 12-month rolling period

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. This emission limitation was developed based on the combined



stack and fugitive emissions using the calculation contained in Engineering Guide #56, the operational restrictions contained in c)(2) and the 95% destruction efficiency requirement. Compliance with the Operational Restrictions in c)(2) and the 95% destruction efficiency requirement serves as adequate demonstration of compliance with the tons of VOC emissions averaged over a rolling, 12-month period.

If required, Methods 1 thru 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A and the procedures outlined in OAC rule 3745-21-10(C) shall be used to demonstrate compliance. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C) and OAC rule 3745-21-22(F)(1)(a) through (F)(1)(c) or an alternative test protocol approved by the Ohio EPA.. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration of the potential presence of interfering gases.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

VOC emissions shall be reduced by ninety-five percent or maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C₆H₁₄) on a dry basis, whichever is less stringent.

Applicable Compliance Method:

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-22(F)(1)(a) through (F)(1)(c) or an alternative test protocol approved by the Ohio EPA.

d. Emission Limitation:

VOC content limitation of the as-applied fountain solution specified in b)(2)c.,

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance according to the procedure specified in OAC rule 3745-21-22(F)(2)(a) through (d) or an alternative test protocol approved by the Ohio EPA..

e. Emission Limitation:

VOC content of cleaning solution limitation specified in b)(2)d.i.



Applicable Compliance Method:

If required, the permittee shall demonstrate compliance according to the procedure specified in OAC rule 3745-21-22(F)(4)(a) through (c) or an alternative test protocol approved by the Ohio EPA.

f. Emission Limitation:

VOC composite partial vapor pressure of cleaning solution limitation specified in b)(2)d.ii.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the procedures specified under OAC rule 3745-21-22(F)(5) or an alternative test protocol.

g. Emission Limitation:

The permittee shall maintain the dryer air pressure lower than the pressroom air pressure at all times the press is operating.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using an airflow direction indicator, such as a smoke stick or aluminum ribbons, or differential pressure gauge.

h. Emission limitation:

Facility-wide emissions of hazardous air pollutants (HAPs) shall not exceed 9.9 tons individual HAPs and 24.9 tons combined of HAPs as a rolling, 12-month summation.

Applicable compliance method:

Compliance shall be demonstrated through monitoring and record keeping requirements of B.2. of this permit.

i. Emission Limitation:

PE from the printing press stack shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.



- (2) The permittee shall conduct, or have conducted, emission testing for this regenerative thermal oxidizer controlling emissions from this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months prior to permit expiration. Additional testing may be required consistent with Ohio EPA DAPC Engineering Guide #16 or by request of the Ohio EPA or Toledo Division of Environmental Services.
 - b. The emission testing shall be conducted to demonstrate compliance with:
 - i. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system); or
 - ii. maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C₆H₁₄) on a dry basis.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s):
 - i. Methods 1-4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A for stack emissions and destruction efficiency in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Samples shall be taken simultaneously at the inlet and outlet of the vapor control system.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while all of the emissions units served by the stack (K002, K005, and K007) are operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit



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and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency. The test report shall include the average combustion temperature within the thermal oxidizer for each test run.

- g) Miscellaneous Requirements
 - (1) None.