



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

9/27/2013

BRUCE COLLINS
Vectra, Inc.
3950 BUSINESS PARK DR
COLUMBUS, OH 43204

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125042121
Permit Number: P0083161
Permit Type: Renewal
County: Franklin

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/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 Ohio EPA DAPC, Central District Office at (614)728-3778 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Vectra, Inc.**

Facility ID:	0125042121
Permit Number:	P0083161
Permit Type:	Renewal
Issued:	9/27/2013
Effective:	9/27/2013
Expiration:	9/27/2023



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

for
Vectra, Inc.

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Authorization

Facility ID: 0125042121
Application Number(s): A0013520, A0013521, A0013522, A0045992
Permit Number: P0083161
Permit Description: PTIO renewal permit for three printing presses.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 9/27/2013
Effective Date: 9/27/2013
Expiration Date: 9/27/2023
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Vectra, Inc.
3990 BUSINESS PARK DR
Columbus, OH 43204

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:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

A handwritten signature in black ink, appearing to read "Scott J. Nally".

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0083161

Permit Description: PTIO renewal permit for three printing presses.

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

Emissions Unit ID:	K001
Company Equipment ID:	Press #1
Superseded Permit Number:	01-4064
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	R004
Company Equipment ID:	Man Roland
Superseded Permit Number:	01-12028
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	R005
Company Equipment ID:	Komori 6 Color Web
Superseded Permit Number:	01-12228
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate

Vectra, Inc.

Permit Number: P0083161

Facility ID: 0125042121

Effective Date: 9/27/2013

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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



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

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

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

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

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

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



Final Permit-to-Install and Operate

Vectra, Inc.

Permit Number: P0083161

Facility ID: 0125042121

Effective Date: 9/27/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Vectra, Inc.

Permit Number: P0083161

Facility ID: 0125042121

Effective Date: 9/27/2013

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



Final Permit-to-Install and Operate

Vectra, Inc.

Permit Number: P0083161

Facility ID: 0125042121

Effective Date: 9/27/2013

C. Emissions Unit Terms and Conditions



1. K001, Press #1

Operations, Property and/or Equipment Description:

Harris 110 heatset web press with oven and catalytic 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. None.

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

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(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.
b.	OAC rule 3745-31-05(A)(3) (PTI No. 01-4064, as issued 12/30/92)	Particulate emissions shall not exceed 0.57 pound per hour and 2.5 tons per year. Organic compound (OC) emissions shall not exceed 3.57 pounds per hour and 15.6 tons per year. See b)(2)a. below.



(2) Additional Terms and Conditions

- a. The permittee shall operate an OC emission control system that reduces the OC emissions from the oven by at least 95% by weight.
- b. The permittee shall burn only natural gas in this emissions unit.

c) Operational Restrictions

- (1) None.

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 monthly records of the following information:
 - a. the name and identification number of each ink, fountain solution, and cleanup material employed;
 - b. the OC content of each ink, fountain solution, and cleanup material employed;
 - c. the amount of each ink, fountain solution, and cleanup material employed;
 - d. the number of hours the oven operated;
 - e. the total OC emissions from all inks, fountain solutions, cleanup materials and fuel burning in the oven, in tons, using the following equations;

Organic compound emissions from ink usage shall be calculated using the following equation.

$$OC_{\text{inks}} = \sum_{i=1}^n (Q_i)(OC_i)(1 - RF)(1 - CE) \div (2,000 \text{ lb/ton})$$

Where:

Q_i = actual usage of ink i, gallons

OC_i = actual OC content of ink i, pounds per gallon

RF = 20% retention factor per Engineering Guide #56

CE = catalytic incinerator control efficiency, as demonstrated during the most recent emissions test that demonstrated compliance

Organic compound emissions from fountain solution and cleanup material usage shall be calculated using the following equation.

$$OC_{\text{fountain solutions and cleanup materials}} = \sum_{i=1}^n (Q_i)(OC_i) \div (2,000 \text{ lb/ton})$$



Where:

Q_i = actual usage of fountain solution/cleanup material i , gallons

OC_i = actual OC content of fountain solution/cleanup material i , pounds per gallon

Organic compound emissions from fuel burning in the oven shall be calculated using the OC emission factor (EF) specified in the most recent version of AP-42, "Compilation of Air Pollutant Emission Factors" and the following equation.

$$OC_{\text{fuel burning}} = EF \times 1.6 \text{ MMBtu/hr} \times \text{hours operated}$$

- f. the year-to-date summation of the OC emissions, in tons.
- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions unit controlled by the catalytic incinerator is 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 was in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit was in compliance.
- (6) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s), on a continuous basis, the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit is in operation, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.
- (7) Whenever the monitored temperature of the exhaust gases immediately before the catalyst bed and/or the temperature difference across the catalyst bed deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.



In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature of the exhaust gases immediately before the catalyst and the average temperature difference across the catalyst bed immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA, Central District Office 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the catalytic incinerator during the 12-month reporting period for this emissions unit:
 - a. each period of time (start time and date, and end time and date) when the temperature of the exhaust gases immediately before the catalyst bed and/or the temperature difference across the catalyst bed was outside of the acceptable ranges;
 - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the catalytic incinerator;
 - c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;



- d. each incident of deviation described in [a] or "b" where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and
 - e. each incident of deviation described in [a] or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- 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 the stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.
 - b. Emissions Limitation

Particulate emissions shall not exceed 0.57 pound per hour and 2.5 tons per year.

Applicable Compliance Method

Emissions testing was conducted for this emissions unit on March 9, 1993. The emissions test demonstrated compliance with the hourly emissions limitation.

Compliance with the annual limitation shall be determined by multiplying the hourly emission rate established by the March 9, 1993 stack test (0.009 pound per hour) or the most recent emission test that demonstrated the emission unit was in compliance by the maximum annual hours of operation of 8,760 and dividing by 2,000 pounds per ton to obtain the annual emissions.

If required, compliance with the PE limitations shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.



c. Emissions Limitation

Organic compound (OC) emissions shall not exceed 3.57 pounds per hour and 15.6 tons per year.

Applicable Compliance Method

Emissions testing was conducted for this emissions unit on March 9, 1993. The emissions test demonstrated compliance with the hourly emissions limitation.

Compliance with the annual emissions limitation shall be demonstrated in accordance with the recordkeeping requirements in d)(2).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A.

g) **Miscellaneous Requirements**

(1) None.



2. R004, Man Roland

Operations, Property and/or Equipment Description:

Man Roland Non Heatset Printing Press

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) (Best Available Technology)	Volatile organic compound (VOC) emissions shall not exceed 10.6 tons per rolling, 12-month period.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the name and identification number of each ink, fountain solution, and cleanup material employed;



- b. the VOC content of each ink, fountain solution, and cleanup material employed;
- c. the amount of each ink, fountain solution, and cleanup material employed;
- d. the total VOC emissions from all inks, fountain solutions and cleanup materials, in tons, using the following equations; and

Volatile organic compound emissions from ink usage shall be calculated using the following equation.

$$VOC_{inks} = \sum_{i=1}^n (Q_i)(VOC_i)(1 - RF) \div (2,000 \text{ lb/ton})$$

Where:

Q_i = actual usage of ink i, pounds

VOC_i = actual VOC content of ink i, percent weight

RF = 95% retention factor per Engineering Guide #68

Volatile organic compound emissions from fountain solution and cleanup material usage shall be calculated using the following equation.

$$VOC_{\text{fountain solutions and cleanup materials}} = \sum_{i=1}^n (Q_i)(VOC_i) \div (2,000 \text{ lb/ton})$$

Where:

Q_i = actual usage of fountain solution/cleanup material i, gallons

VOC_i = actual OC content of fountain solution/cleanup material i, pounds per gallon

- e. the rolling, 12-month VOC emissions, in tons.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA, Central District Office 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation

Volatile organic compound (VOC) emissions shall not exceed 10.6 tons per rolling, 12-month period.



Applicable Compliance Method

Compliance with the emissions limitation shall be demonstrated in accordance with the recordkeeping requirements in d)(1).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A.

g) Miscellaneous Requirements

- (1) None.



3. R005, Komori 6 Color Web

Operations, Property and/or Equipment Description:

Komori 6 Color Web Heatset Printing Press with oven and thermal 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. None.

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

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(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.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Volatile organic compound (VOC) emissions shall not exceed 42.6 lb/day.</p> <p>Carbon monoxide (CO) emissions from the combustion of natural gas in the oven associated with this emissions unit shall not exceed 0.21 lb/hr and 0.94 ton/yr.</p> <p>Nitrogen oxide (NOx) emissions from the combustion of natural gas in the oven associated with this emissions unit shall not exceed 0.25 lb/hr and 1.12 ton/yr.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Particulate emissions (PE) from the combustion of natural gas in the oven associated with this emissions unit shall not exceed 0.02 lb/hr and 0.08 ton/yr.</p> <p>Sulfur dioxide (SO₂) emissions from the combustion of natural gas in the oven associated with this emissions unit shall not exceed 0.002 lb/hr and 0.007 ton/yr.</p> <p>See b)(2)a., b)(2)c. and b)(2)d. below.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (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 the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) 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 limitations/control measures no longer apply.
- b. The following rule paragraphs will apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
 - i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NOx, PE and SO₂ emissions from this air contaminant source since the potentials to emit are less than 10 tons per year.
 - ii. The permittee has agreed to the following voluntary restriction for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

To vent the VOC emissions from this emissions unit to the/a thermal incinerator when the emissions unit is in operation to ensure controlled potential VOC emissions are less than 10 tons per year.



- c. The daily VOC emission limitation was established to reflect the potential to emit for this emissions unit taking into consideration the voluntary restriction established under OAC rule 3745-31-05 for the control of VOC emissions. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with this limitation.
- d. The hourly and annual CO, NO_x, PE and SO₂ emission limitations were established to reflect the potential to emit for each pollutant related to the combustion of natural gas in the oven associated with this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.
- e. The permittee shall burn only natural gas in this emissions unit.

c) Operational Restrictions

- (1) None.

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) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit controlled by the thermal incinerator is 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 was in compliance.
- (3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal incinerator when the emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the combustion temperature on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.
- (4) The permittee shall collect and record the following information each day the emissions unit is in operation:
 - a. all 3-hour blocks of time, when the emissions unit controlled by the thermal incinerator was in operation, during which the average combustion temperature within the thermal incinerator was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and



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

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA, Central District Office 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify in the annual PER the following information concerning the operations of the thermal incinerator during the 12-month reporting period for this emissions unit:
 - a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal incinerator was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal incinerator;
 - c. each incident of deviation described in [a] or "b" (above) where a prompt investigation was not conducted; and
 - d. each incident of deviation described in [a] or "b" where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature within the thermal incinerator into compliance with the acceptable range, was determined to be necessary and was not taken.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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 the stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.



Applicable Compliance Method

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation

Volatile organic compound (VOC) emissions shall not exceed 42.6 lb/day (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The daily VOC emissions limitation was established by summing the maximum hourly VOC emissions from inks, fountain solution and cleanup material using the following equations.

$$\begin{aligned} \text{VOC from inks} &= (\text{Ink}) \times (\text{VOC}_{\text{ink}}) \times (1 - \text{RF}_{\text{ink}}) \times (1 - \text{CE}_{\text{ti}}) \\ \text{VOC fountain solution (fugitive)} &= (\text{FS}) \times (\text{VOC}_{\text{FS}}) \times (1 - \text{CE}_{\text{FS}}) \\ \text{VOC fountain solution (stack)} &= (\text{FS}) \times (\text{VOC}_{\text{FS}}) \times (\text{CE}_{\text{FS}}) \times (1 - \text{CE}_{\text{ti}}) \\ \text{VOC from cleanup material} &= (\text{CM}) \times (\text{VOC}_{\text{CM}}) \end{aligned}$$

Where:

- Ink = Maximum ink usage (312 lb/day)
- VOC_{ink} = Maximum VOC content of ink (52%)
- RF_{ink} = Substrate retention factor per Engineering Guide #56 (20%)
- CE_{ti} = thermal incinerator control efficiency as demonstrated during 12/8/2011 emissions test (99.7%)
- FS = Maximum fountain solution usage (18 gal/day)
- VOC_{FS} = Maximum VOC content of fountain solution (2.26 lb/gal)
- CE_{FS} = Fountain solution capture efficiency per Engineering Guide #56 (70%)
- CM = Maximum cleanup material usage (4.60 gal/day)
- VOC_{CM} = Maximum VOC content of cleanup material (6.51 lb/gal)

If required, the permittee shall demonstrate compliance with the emissions limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A.

c. Emission Limitation

Carbon monoxide (CO) emissions shall not exceed 0.21 lb/hr and 0.94 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).



Applicable Compliance Method

The hourly allowable mass emission rate for CO was established using the CO emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-1 (7/98) and the following equation.

CO = EF x 2.6 MMBtu/hr, where

$$EF = (84 \text{ lb CO}/10^6\text{scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 10.

d. Emission Limitation

Nitrogen oxide (NO_x) emissions shall not exceed 0.25 lb/hr and 1.12 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for NO_x was established using the NO_x emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-1 (7/98) and the following equation.

NO_x = EF x 2.6 MMBtu/hr, where

$$EF = (100 \text{ lbNO}_x/10^6\text{scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

e. Emission Limitation

Particulate emissions (PE) shall not exceed 0.02 lb/hr and 0.08 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for PE was established using the PE emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) and the following equation.

PE = EF x 2.6 MMBtu/hr, where



$$EF = (7.6 \text{ lb PE}/106 \text{ scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

f. Emission Limitation

Sulfur dioxide (SO₂) emissions shall not exceed 0.002 lb/hr and 0.007 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for SO₂ was established by using the SO₂ emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) and the following equation.

$$SO_2 = EF \times 2.6 \text{ MMBtu}/\text{hr}, \text{ where}$$

$$EF = (0.6 \text{ lb SO}_2/10^6\text{scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 6C.

g) Miscellaneous Requirements

- (1) None.