



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

11/8/2010

Mr. Dan Tatman
RR Donnelley - Greenfield Div
1025 North Washington St.
Greenfield, OH 45123

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0536010011
Permit Number: P0106524
Permit Type: Initial Installation
County: Highland

Certified Mail

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

Dear Permit Holder:

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

The issuance of this PTI 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 Kevin Boyce," 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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Southwest District Office at (937)285-6357 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: Ohio EPA-SWDO



Response to Comments

Response to comments for: Permit-To-Install and Operate

Facility ID:	0536010011
Facility Name:	RR Donnelley - Greenfield Div
Facility Description:	printing facility
Facility Address:	1025 NORTH WASHINGTON ST. Greenfield, OH 45123 Highland County
Permit #:	P0106524, Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Times Gazette on 10/01/2010. The comment period ended on 10/31/2010.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: **RR Donnelley**
 - a. Comment: Concern about HAP language and recordkeeping requirements
 - b. Response: Updated ST&C's and company agreed with changes.
2. Topic: **None**
 - a. Comment: **None**
 - b. Response: **None**



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
RR Donnelley - Greenfield Div**

Facility ID: 0536010011
Permit Number: P0106524
Permit Type: Initial Installation
Issued: 11/8/2010
Effective: 11/8/2010
Expiration: 11/8/2015



Division of Air Pollution Control
Permit-to-Install and Operate
for
RR Donnelley - Greenfield Div

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Authorization

Facility ID: 0536010011
Application Number(s): A0039324
Permit Number: P0106524
Permit Description: Installation of Press 351 - 5 unit 1/2 web heatset offset lithographic press w/catalytic incinerator
Permit Type: Initial Installation
Permit Fee: \$200.00
Issue Date: 11/8/2010
Effective Date: 11/8/2010
Expiration Date: 11/8/2015
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

RR Donnelley - Greenfield Div
1025 NORTH WASHINGTON ST.
Greenfield, OH 45123

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southwest District Office
401 East Fifth Street
Dayton, OH 45402
(937)285-6357

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Chris Korleski
Director

Authorization (continued)

Permit Number: P0106524
Permit Description: Installation of Press 351 - 5 unit 1/2 web heatset offset lithographic press w/catalytic incinerator

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

Emissions Unit ID:	R008
Company Equipment ID:	5 Unit Heatset 1/2 Web Offset Lithographic Press
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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, Southwest 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.

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

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

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.

B. Facility-Wide Terms and Conditions

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

C. Emissions Unit Terms and Conditions



1. R008, 5 Unit Heatset 1/2 Web Offset Lithographic Press

Operations, Property and/or Equipment Description:

Press 351 - 5 unit 1/2 web heatset offset lithographic press w/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. b)(1)h., and d)(12).

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	The use of a control device in order to reduce and/or eliminate the emission of volatile organic compound (VOC) and/or organic compounds (OC) from this emissions unit The hourly emissions from this emissions unit shall not exceed 5.9 pounds of volatile organic compounds (VOC) and/or organic compounds (OC), as a monthly average.
b.	OAC paragraph 3745-31-05(A)(3), as effective 11/30/01	Emissions from the combustion of natural gas in this emissions unit shall not exceed: 0.04 pounds per hour, nor 0.18 tons per year of PM; 0.01 pounds per hour, nor 0.044 tons per year of PM10; 0.003 pounds per hour, nor 0.01 tons per

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		year of SO ₂ ; 0.52 pounds per hour, nor 2.3 tons per year of NO _x ; 0.43 pounds per hour, nor 1.9 tons per year of CO; and 0.03 pounds per hour, nor 0.13 tons of VOC.
c.	OAC paragraph 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See section b)(2)f., below.
d.	OAC rule 3745-31-05(D) (to avoid becoming a Title V facility)	The combined VOC/OC emissions from emissions units R001, R002, and R006 thru R008 shall not exceed 95.0 tons per rolling, 12-month period. The Hazardous Air Pollutants (HAPs), emissions from the emissions units at this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs.
e.	OAC rule 3745-17-07	Visible particulate emissions from the vent serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-10(B)	0.02 lb of PE per mmBTU from the combustion of gaseous fuels
g.	OAC rule 3745-21-07(G)(9)	The use of non-photochemically reactive materials, (PRM). See section b)(2)g., below.
h.	OAC rule 3745-114-01	Ohio Toxic Rule See section d)(12), below.

(2) Additional Terms and Conditions

- a. The OC emissions for limitation of 5.9 pounds/hour (as a monthly average) for emissions unit R008 are based on the following information:
 - i. The percentage of the ink solvent retained on the web after the dryer is 20 percent*;

- ii. The percentage of the fountain solution solvent available for capture in the dryer is 70 percent*;
- iii. The percentage of the auto blanket wash (clean up) solvent available for capture in the dryer is 40 percent*; and,
- iv. The percentage of the hand blanket wash (clean up) solvent retained on the cloths is 50 percent*.

* This is based on the Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing, EPA-453/R-06-002, September 2006.

- b. The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R006, R007 and R008 combined, based upon a rolling, 12-month summation of the monthly emissions. The OC emission limitation is based on OC content, usage restrictions and OC control requirements for the purpose of establishing federally enforceable limitations. For purposes of federal enforceability, OC limitations effectively restrict VOC emissions.
- c. The permittee shall employ best available technology (BAT) on this emissions unit. BAT has been determined to be the use of a control system for OC emissions, meeting the following requirements:
 - i. The control system shall consist of a collection system for the dryer. The collection system shall achieve a capture efficiency of 100 percent of the press dryer exhaust; and,
 - ii. The control system shall be equipped with an oxidizer with a destruction efficiency of at least 92 percent when operating at the average temperature specified in condition c)(3), of this permit.
- d. 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 less than ten tons per year. However, that rule revision has not yet been approved by the 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 the 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 3745-31-05, then these emission limits/control measures no longer apply.
- e. The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply since the facility is located in Highland County, which is identified as a P-3 county.

This emissions unit is not subject to the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because OAC rule 3745-17-11 is not applicable.

- f. 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, (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon monoxide (CO) emissions from this emissions unit since the potential emissions are less than ten tons per year.

- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The requirements of amended OAC rule 3745-21-07 do not apply to emissions units that are installed after February 18, 2008. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

- i. b)(1)g.,
- ii. d)(10), and
- iii. e)(1)i.

- h. The actual usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility shall not exceed 9.9 TPY* for any single HAP and 24.9 TPY* for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

c) Operational Restrictions

- (1) The permittee shall comply with the following average OC content restrictions for the materials employed in this emissions unit:
- a. Ink: 45% OC by weight, as applied;
 - b. Coating: 10% OC by weight, as applied;
 - c. Fountain solution: 0.25 pound OC per gallon of fountain solution material, as applied; and,
 - d. Cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.
- (2) The rolling 12-month usage rate of VOC/OC containing materials for emission units R001, R002, R006, R007 and R008 is limited by the following equation:

$$E_M = \sum E_n \leq 95.0 \text{ tons}$$

Where:

E_M = the increment of the rolling 12-month period and the subsequent emissions calculated using the following equation: $E_M = E_1 + E_2 + E_3 + \dots + E_n$ (summation of all increments consumed for each product);

E_n = the increment of the OC containing material used for each product during the period and the subsequent emissions calculated using the following equation: $E_n = [U_n \times V_n \times (1 - R_n/100) \times \{1 - (C_n/100) \times (K/100)\}]$; and

All other variables are the same as described in section d)(1)d.

- (3) The average temperature at the inlet to the oxidizer catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 603 degrees Fahrenheit. A lower average temperature requirement may be established if compliance with the minimum destruction efficiency of 92 percent is demonstrated during emissions testing as required in section f)(2).
- (4) The fuel employed in the dryers and oxidizers employed in this emissions unit shall be only natural gas.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, coating, fountain solution, cleanup material, and blanket wash) employed in emissions unit R008:
 - a. The name and identification number of each graphic arts material employed;
 - b. The OC content of each graphic arts material, in pounds/gallon or pounds/pound for inks and coatings, as received;
 - c. The quantity of each graphic arts material employed, in gallons or pounds of each material per month;
 - d. The OC emissions for each graphic arts material employed, in pounds or tons/month, calculated as follows:

$$E_n = [U_n \times V_n \times (1 - R_n/100) \times \{1 - (C_n/100) \times (K/100)\}]$$

Where:

E_n = OC emissions from an individual material (pounds of OC emitted/month);

U_n = total usage of the individual material - typically ink, coating, fountain solution, and cleaning solvents (lbs or gallons of material/month);

V_n = average OC content of material as determined by Method 24 (lb OC/lb or gallon of material);

R_n = percent of OC retained on the web or on cloths:

R_n = 20 for heatset inks

R_n = 0 for coatings

R_n = 0 for fountain solutions

R_n = 0 for auto blanket wash (cleanup) solvent

R_n = 50 for hand blanket wash (cleanup) solvent

C_n = capture efficiency for individual material emitted:

C_n = 100 for heatset inks

C_n = 0 for coatings

C_n = 70 for heatset fountain solutions

C_n = 40 for heatset auto blanket wash (cleanup) solvent

C_n = 0 for hand blanket wash (cleanup) solvent

K = destruction efficiency as determined during the performance test as specified in section f)(2).

- e. The total OC emission rate of all graphic arts materials employed, in pounds or tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

Where:

E_M = Monthly OC emissions, in pounds/month; and,

E_1 through E_n = OC emissions from each individual graphic arts material (section d)(1)d.).

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hour/month)

- g. The average hourly OC emissions rate, i.e. "e" divided by "f" above.

- (2) In addition to the above information, the permittee shall maintain monthly records of the following in order to demonstrate compliance with the initial monthly OC emission rate, and the rolling, 12-month VOC/OC emission rate for emissions unit R001, R002, R006, R007 and R008 combined:

- a. The rolling, 12-month VOC/OC emission rate, calculated as follows:

$$E_T = (E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}) / 2000 \text{ lbs}$$

Where:

E_T = Rolling 12-month VOC/OC emissions (tons) as summed from the previous 12 months of monthly VOC/OC emissions; and

E_M = Monthly VOC/OC emissions (pounds/month).

The total VOC/OC emission rate of all graphic arts materials employed, in pounds or tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

Where:

E_M = Monthly VOC/OC emissions, in pounds/month; and,

E_1 through E_n = VOC/OC emissions from each individual graphic arts material (Section d)(1)d.).

- (3) The permittee shall maintain monthly records of the following information in order to demonstrate compliance with the monthly average OC content of ink, fountain solution, cleanup material, and blanket wash, as employed in emissions unit R008:
- a. The OC content of each ink, fountain solution, cleanup material, and blanket wash employed during the month (pound(s)} OC/pound ink or gallon of each material);
 - b. The total gallons or pounds of each individual ink, fountain solution, cleanup material, and blanket wash employed during the month;
 - c. The total OC usage, in pounds of OC/month, from each individual ink, fountain solution, cleanup material, and blanket wash employed, i.e., the product of the OC content "a" times the usage "b" (above) for each material employed during the month;
 - d. The sum of the monthly OC usage for all inks, fountain solutions, cleanup materials, and blanket wash materials (separately) employed, i.e., the sum of "c" (above) for all inks, fountain solutions, cleanup, and blanket wash materials (e.g., lbs OC from all inks/month);
 - e. The total gallons or pounds of inks, fountain solutions, cleanup materials, and blanket wash materials (separately) employed during the month (e.g., lbs ink/month); and
 - f. The monthly average OC per gallon or pound of ink, fountain solution, cleanup material, and blanket wash, i.e., "d" divided by "e" (above) for each type of material (e.g., lb OC/lb ink).
- (4) The permittee shall operate and maintain continuous temperature monitors and a temperature recorder which measures and records the temperature at the inlet to the oxidizer catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately

measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day for this emissions unit:

- a. All 3-hour blocks of time during which the average temperature at the inlet to the oxidizer catalyst bed, when the emissions unit was in operation, was less than 603 degrees Fahrenheit. A lower average temperature requirement may be established if compliance with the minimum destruction efficiency of 92 percent is demonstrated during emissions testing as required in section f)(2).; and,
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.
- (5) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the oxidizer being employed, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.
- (6) The permittee shall conduct periodic inspections of the oxidizer and dryer enclosure being employed to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.
- (7) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the oxidizer and dryer enclosure being employed while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (8) The permittee shall document each inspection (periodic and annual) of the oxidizer and dryer enclosure being employed and shall maintain the following information:
- a. the date of the inspection;
 - b. a description of each/any problem identified and the date it was corrected;
 - c. a description of any maintenance and repairs performed; and
 - d. the name of person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

- (9) For each day during which the permittee burns a fuel other than natural gas in the dryer and/or the oxidizer. The permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (10) The permittee shall maintain the following monthly records on all liquid organic materials employed in this emissions unit, not involved in metal coating:
- a. the name and identification number of each liquid organic material employed;
 - b. whether or not the liquid organic material contains photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- (11) The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, coating, fountain solution, cleanup material, and blanket wash) employed in the emissions units at this facility:
- a. The name and identification number of each graphic arts material employed;
 - b. The individual hazardous air pollutant (HAP) content of each graphic arts material, in pounds/gallon or pounds/pound for inks and coatings, as received;
 - c. The quantity of each graphic arts material employed, in gallons or pounds of each material per month;
 - d. The individual HAP emissions for each graphic arts material employed, in pounds or tons/month, calculated as follows:

$$E_n = [U_n \times V_n \times (1 - R_n/100) \times \{1 - (C_n/100) \times (K/100)\}]$$

Where:

E_n = individual HAP emissions from an individual material (pounds of HAP emitted/month);

U_n = total usage of the individual material - typically ink, coating, fountain solution, and cleaning solvents (lbs or gallons of material/month);

V_n = average HAP content of material (pound of HAP per pound of material or gallon of material);

R_n = percent of individual HAP retained on the web or on cloths:

R_n = 20 for heatset inks

R_n = 0 for coatings

R_n = 0 for fountain solutions

R_n = 0 for auto blanket wash (cleanup) solvent

R_n = 50 for hand blanket wash (cleanup) solvent

C_n = capture efficiency for individual material emitted:

C_n = 100 for heatset inks

C_n = 0 for coatings

C_n = 70 for heatset fountain solutions

C_n = 40 for heatset auto blanket wash (cleanup) solvent

C_n = 0 for hand blanket wash (cleanup) solvent

K = destruction efficiency as determined during the performance test as specified in section f)(2).

- e. The total individual HAP emission rate of all graphic arts materials employed, in pounds or tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

Where:

E_M = Monthly individual HAP emissions, in pounds/month; and,

E_1 through E_n = HAP emissions from each individual graphic arts material (section d)(11)d.).

- f. the updated rolling, 12-month emission summation for each individual HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- g. the updated rolling, 12-month emission summation for total combined HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

- (12) 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 permit to install 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 permit to install.

[ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. all exceedances of combined rolling, 12-month period VOC/OC limitation of 95.0 tons, from emissions units R001, R002, and R006 thru R008;
- b. all exceedances of average VOC/OC emissions of 5.9 pounds, from this emissions unit;
- c. all instances in which inks were employed with, a percent by weight, greater than 45%; as applied, based on a monthly average;
- d. all instances in which coatings were employed with, a percent by weight, greater than 10%; as applied, based on a monthly average;
- e. all instances in which fountain solutions were employed with, a VOC/OC content, greater than 0.25 pounds per gallon, as applied, based on a monthly average;
- f. all instances in which cleanup materials, (auto and blanket wash), were employed with, a VOC/OC content, greater than 7.5 pounds per gallon, as applied, based on a monthly average;
- g. all instance when the average temperature at the inlet to the oxidizer catalyst bed, for any 3-hour block of time when the emissions unit is in operation, is less than 603 degrees Fahrenheit, or a lower average temperature requirement that is be established during future testing as required by section f)(2);
- h. when the oxidizer system being employed was not in service when the emissions unit was operating, as well as, all operations during which the oxidizer control system was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee;
- i. an identification use of "photochemical reactive material";
- j. an identification of each month during which the individual HAP emissions from all emissions units at this facility exceeded 9.9 tons per year, based on a 12-month rolling average; and
- k. an identification of each month during which the combined HAP emissions all emissions units at this facility exceeded 24.9 tons per year, based on a 12-month rolling average.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

The quarterly reports shall be submitted (postmarked) each year by the thirty-first of January (covering October to December), the thirtieth of April (covering January to March), the thirty-first of July (covering April to June), and the thirty-first of October (covering July to September), unless an alternative schedule has been established and approved by the director of the Ohio EPA, and/or the Ohio EPA Southwest District Office (SWDO).

[OAC rule 3745-15-03(B)(1)(a)], [OAC rule 3745-15-03(C)], and [OAC rule 3745-77-07(A)(3)(c)]

- (2) 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 Methods Requirements: Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

5.9 pounds per hour of VOC/OC, as based on a monthly average.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation through the recordkeeping required in section d)(1). of this permit.

b. Emission Limitation:

95.0 tons of OC per rolling 12-month summation for emissions units R001.R002, R006, R007 and R008 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation through the recordkeeping required in section d)(2). of this permit.

c. Emission Limitation:

Emissions from the combustion of natural gas in this emissions unit shall not exceed:

0.04 pounds per hour, nor 0.18 tons per year of PM;

0.01 pounds per hour, nor 0.044 tons per year of PM10;

0.003 pounds per hour, nor 0.01 tons per year of SO₂;

0.52 pounds per hour, nor 2.3 tons per year of NO_x;

0.43 pounds per hour, nor 1.9 tons per year of CO; and

0.03 pounds per hour, nor 0.13 tons of VOC.

The above limitations are based on the following equations:

$$\text{HER} = [\text{Btu} / (1000 \text{ btu/cf})] \times \text{Ef}$$

$$\text{AER} = (\text{HER} \times 8760) / 2000$$

Where:

HER = Hourly emissions rate, in pounds emitted per hour;

AER = Annual Emission Rate, in tons emitted per year;

Btu = Combined BTU heat input of the dryer and oxidizer of natural gas fired burners associated with this emissions unit, in mmBTU/hr, ((3.38 mmBTU/hr (dryer) + 1.76 mmBTU/hr (oxidizer) = 5.14 mm BTU/hr combined) from PTI application);

Ef = Emissions factors, in pounds emitted per mmcf, (7.6 PM, 1.9PM10, 0.6 SO₂, 100 NO_x, 84 CO, and 5.5 TOC (VOC), from PTI application calculation sheet and AP-42).

Applicable Compliance Method:

Compliance will be assumed based on the use of natural gas and the recordkeeping in section d)(9) of this permit.

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

e. Emission Limitation:

0.02 lb of PE per mmBTU from the combustion of gaseous fuels

Applicable Compliance Method:

Compliance will be assumed based on the use of natural gas and the recordkeeping in section d)(9) of this permit.

f. Emission Limitation:

The use of non-PRM containing liquid organic material.

Applicable Compliance Method:

Compliance will be assumed based on the use of non-photochemically reactive materials and the recordkeeping in section d)(10) of this permit.

g. Emission Limitation:

Individual HAP emissions shall not exceed 9.9 tons and combined HAP(s) emissions shall not exceed 24.9 tons per rolling, 12-month period from all emissions units at this facility.

Applicable Compliance Method:

Compliance with the above HAP(s) emission limitations shall be demonstrated through the record keeping requirements established in Section d)(11) of this permit.

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted within 12 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency requirement and destruction efficiency in section b)(2)c.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate:
 - i. In accordance with Ohio EPA's Engineering Guide #56, the capture efficiency may be assumed to be 100 percent for organic compounds not retained in the substrate or emitted uncontrolled, provided that the press dryer maintains a negative pressure within the press dryer and the dryer exhausts to a control device (the catalytic oxidizer). Therefore, during testing of the catalytic oxidizer, the permittee shall verify that a negative pressure is maintained within the press dryer.
 - ii. The destruction efficiency shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds between the inlet and outlet of the catalytic oxidizer. The test method selected shall be based on a consideration of the diversity of organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. As part of the performance test, the permittee shall collect and record the average temperature at the inlet to the oxidizer catalyst bed, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.

The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA Southwest District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Southwest District Office. 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 Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Southwest District Office 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.

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 Ohio EPA Southwest District Office 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 Ohio EPA Southwest District Office.

g) **Miscellaneous Requirements**

- (1) None.