

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install: 05-14438

A. Source Description

Medium size printing company with five offset/heatset printing presses, three catalytic oxidizers and two thermal oxidizers. The source is located in Highland County. RR Donnelley has requested OC and HAP limits to ensure the nonapplicability of Title V requirements.

B. Facility Emissions and Attainment Status

The facility is not located in an Appendix A area.

C. Source Emissions

Source emissions will be limited to 95.0 TPY OC combined from inks, coating materials and cleanup material use.

D. Conclusion

This synthetic minor permit to install will effectively limit the facilitywide emissions to levels well below Title V thresholds. The emissions limitations identified in this permit represent all the air contaminant emissions at this facility. A combination of a rolling, 12-month emissions limitations, monthly record keeping requirements and deviation reporting requirements shall ensure that compliance with the permit is maintained.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
HIGHLAND COUNTY**

CERTIFIED MAIL

Street Address:

Mailing Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Lazarus Gov.
Center

Application No: 05-14438

Fac ID: 0536010011

DATE: 6/10/2008

RR Donnelly Greenfield Division
Daniel Tatman
1025 N Washington St
Greenfield, OH 45123

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1000** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

SWDO

KY

IN
**HIGHLAND
COUNTY**

PUBLIC NOTICE

ISSUANCE OF DRAFT PERMIT TO INSTALL **05-14438** FOR AN AIR CONTAMINANT SOURCE

FOR RR Donnelly Greenfield Division

On 6/10/2008 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **RR Donnelly Greenfield Division**, located at **1025 N Washington St, Greenfield**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 05-14438:

Modification to establish facility wide limits.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Jeff Hines, Ohio EPA, Southwest District Office, 401 East Fifth Street, Dayton, OH 45402-2911
[(937)285-6357]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 05-14438

Application Number: 05-14438
Facility ID: 0536010011
Permit Fee: **To be entered upon final issuance**
Name of Facility: RR Donnelly Greenfield Division
Person to Contact: Daniel Tatman
Address: 1025 N Washington St
Greenfield, OH 45123

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1025 N Washington St
Greenfield, Ohio**

Description of proposed emissions unit(s):
Modification to establish facility wide limits.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

RR Donnelly Greenfield Division
PTI Application: 05-14438
Issued: To be entered upon final issuance
Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 0536010011

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

RR Donnelly Greenfield Division**Facility ID: 0536010011****PTI Application: 05-14438****Issued: To be entered upon final issuance**

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

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Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available

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Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

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permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	95.0

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (R001) - Heatset printing press 350 with catalytic oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	4.5 lbs/hr organic compounds (OC)/hour, as a monthly average. See Section A.2.c and A.2.d.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V	OC emissions shall not exceed 95.0 tons per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined. See Section A.2.b.
OAC rule 3745-17-11(B)	See Section A.2.e.
OAC rule 3745-17-07(A)	See Section A.2.f.

2. Additional Terms and Conditions

- 2.a The OC emission limitation of 4.5 pounds/hour (as a monthly average) for emissions unit R001 is 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

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- 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 for Offset Lithographic Printing and Letterpress Printing, EPA-453/R-06-002, September 2006.

2.b The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R005, R006 and R007 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.

2.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 B.3. of this permit.

2.d The requirements of this rule also include compliance with the requirements established under OAC rule 3745-31-05(C).

2.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.

2.f 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.

B. 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 /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 maximum rolling 12-month usage rate of OC containing materials for emissions units R001, R002, R005, R006 and R007 is limited by the following equation:

$$E_M = 3 E_n \#95.0 \text{ tons}$$

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); and

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 where all other variables are the same as described in paragraph C.1.d. below.

3. The average temperature within the oxidizer, 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 in A.2.c.ii. is demonstrated during emissions testing.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit R001:
 - 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, 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, 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 inks

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:

Emissions Unit ID: R001

 $C_n = 100$ for inks $C_n = 70$ for fountain solutions $C_n = 40$ for auto blanket wash (cleanup) solvent $C_n = 0$ for hand blanket wash (cleanup) solvent; and

$K =$ destruction efficiency as determined during the performance test as specified in condition E.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 C.1.d).

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hours/month);
- g. The average hourly OC emission 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 rolling, 12-month OC emission rate for emissions units R001, R002, R005, R006 and R007 combined:

- a. The rolling, 12-month 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 OC emissions (tons) as summed from the previous 12 months of monthly OC emissions; and

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

3. The permittee shall maintain monthly records of the following information in order to

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demonstrate compliance with the monthly average OC content of ink, fountain solution, cleanup material, and blanket wash, as employed in emissions unit R001:

- 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 a continuous temperature monitor and a temperature recorder which measure and record the average temperature within the oxidizer 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:

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Emissions Unit ID: **R001**

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- a. All 3-hour blocks of time during which the average temperature within the oxidizer, when the emissions unit was in operation, was less than the temperature limitation specified in condition B.3 of this permit; and
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
 - a. The emission limitation of 4.5 pounds OC/hour (as a monthly average), as determined in condition A.1.;
 - b. The monthly average OC content restrictions for inks, fountain solutions, blanket wash, and cleanup materials, as determined in condition C.3.; and
 - c. The emission limitation of 95.0 tons OC/rolling, 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average temperature at the oxidizer inlet does not comply with the temperature limitation specified in condition B.3. of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports that include a log of the downtime for the capture (collection) system and/or the oxidizer when the emissions unit was in operation.
4. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in condition A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
4.5 pounds OC/hour (as a monthly average)

RR Donnelly Greenfield Division

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Emissions Unit ID: R001

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly OC emission limitation from this emissions unit through the record keeping requirements of Sections C.1 and C.3.

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- b. Emission Limitation:
95.0 tons of OC per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limit based upon the record keeping requirements of Section C.2.

- 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 the Permits to Operate (PTO).
 - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency (see E.2.c.i) and destruction efficiency (see E.2.c.ii) for OC.
 - 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

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temperature at the catalytic oxidizer inlet, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.

3. 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 no later than 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.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment -(R002) - Heatset printing press 380 with catalytic oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	6.9 lbs/hr organic compounds (OC)/hour, as a monthly average. See Section A.2.c and A.2.d.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V	OC emissions shall not exceed 95.0 tons per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined. See Section A.2.b.
OAC rule 3745-17-11(B)	See Section A.2.e.
OAC rule 3745-17-07(A)	See Section A.2.f.

2. Additional Terms and Conditions

- 2.a The OC emission limitation of 6.9 pounds/hour (as a monthly average) for emissions unit R002 is 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

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the
cloths is 50 percent*.

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

- 2.b** The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R005, R006 and R007 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.
- 2.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 B.3. of this permit.
- 2.d** The requirements of this rule also include compliance with the requirements established under OAC rule 3745-31-05(C).
- 2.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.
- 2.f** 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.

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B. 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. Fountain solution: 0.25 pound OC /gallon of fountain solution material, as applied;
and
 - c. Cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.

2. The maximum rolling 12-month usage rate of OC containing materials for emissions units R001, R002, R005, R006 and R007 is limited by the following equation:

$$E_M = 3 E_n \#95.0 \text{ tons}$$

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); and

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 where all other variables are the same as described in paragraph C.1.d. below.

3. The average temperature within the oxidizer, 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 in A.2.c.ii. is demonstrated during emissions testing.

C. Monitoring and/or Recordkeeping Requirements

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1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit R002:
 - 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, 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, 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 inks

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 inks

C_n = 70 for fountain solutions

C_n = 40 for auto blanket wash (cleanup) solvent

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$C_n = 0$ for hand blanket wash (cleanup) solvent; and

$K =$ destruction efficiency as determined during the performance test as specified in condition E.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 C.1.d).

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hours/month);
- g. The average hourly OC emission 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 rolling, 12-month OC emission rate for emissions units R001, R002, R005, R006 and R007 combined:

- a. The rolling, 12-month 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 OC emissions (tons) as summed from the previous 12 months of monthly OC emissions; and

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

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,

Emissions Unit ID: R002

cleanup material, and blanket wash, as employed in emissions unit R002:

- 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 a continuous temperature monitor and a temperature recorder which measure and record the average temperature within the oxidizer 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:

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- a. All 3-hour blocks of time during which the average temperature within the oxidizer, when the emissions unit was in operation, was less than the temperature limitation specified in condition B.3 of this permit; and
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
 - a. The emission limitation of 6.9 pounds OC/hour (as a monthly average), as determined in condition A.1.;
 - b. The monthly average OC content restrictions for inks, fountain solutions, blanket wash, and cleanup materials, as determined in condition C.3.; and
 - c. The emission limitation of 95.0 tons OC/rolling, 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average temperature at the oxidizer inlet does not comply with the temperature limitation specified in condition B.3. of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports that include a log of the downtime for the capture (collection) system and/or the oxidizer when the emissions unit was in operation.
4. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in condition A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
6.9 pounds OC/hour (as a monthly average)

RR Donnelly Greenfield Division

DTI Application: 05-14428

Facility ID: 0536010011

Emissions Unit ID: R002

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly OC emission limitation from this emissions unit through the record keeping requirements of Sections C.1 and 3.

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- b. Emission Limitation:
95.0 tons of OC per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limit based upon the record keeping requirements of Section C.2.

- 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 the Permits to Operate (PTO).
 - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency (see E.2.c.i) and destruction efficiency (see E.2.c.ii) for OC.
 - 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

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temperature at the catalytic oxidizer inlet, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.

3. 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 no later than 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.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment -(R005) - Heatset printing press 360 with catalytic oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	5.8 lbs/hr organic compounds (OC)/hour, as a monthly average. See Section A.2.c and A.2.d.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V	OC emissions shall not exceed 95.0 tons per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined. See Section A.2.b.
OAC rule 3745-17-11(B)	See Section A.2.e.
OAC rule 3745-17-07(A)	See Section A.2.f.

2. Additional Terms and Conditions

- 2.a The OC emission limitation of 5.8 pounds/hour (as a monthly average) for emissions unit R005 is 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

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- 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 for Offset Lithographic Printing and Letterpress Printing, EPA-453/R-06-002, September 2006.

- 2.b** The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R005, R006 and R007 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.
- 2.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 B.3. of this permit.
- 2.d** The requirements of this rule also include compliance with the requirements established under OAC rule 3745-31-05(C).
- 2.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.
- 2.f** 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.

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B. 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 /gallon of fountain solution material, as applied;
and

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- d. Cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.
2. The maximum rolling 12-month usage rate of OC containing materials for emissions units R001, R002, R005, R006 and R007 is limited by the following equation:

$$E_M = 3 E_n \#95.0 \text{ tons}$$

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); and

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 where all other variables are the same as described in paragraph C.1.d. below.

3. The average temperature within the oxidizer, 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 in A.2.c.ii. is demonstrated during emissions testing.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit R005:
 - 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, as received;

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- 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, 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 inks

$R_n = 0$ 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 inks

$C_n = 70$ for fountain solutions

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

$C_n = 0$ for hand blanket wash (cleanup) solvent; and

K = destruction efficiency as determined during the performance test as specified in condition E.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:

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

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

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hours/month);
 - g. The average hourly OC emission 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 rolling, 12-month OC emission rate for emissions units R001, R002, R005, R006 and R007 combined:

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- a. The rolling, 12-month 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 OC emissions (tons) as summed from the previous 12 months of monthly OC emissions; and

E_M = Monthly OC emissions (pounds/month).

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 R005:
- 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

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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 a continuous temperature monitor and a temperature recorder which measure and record the average temperature within the oxidizer 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 within the oxidizer, when the emissions unit was in operation, was less than the temperature limitation specified in condition B.3 of this permit; and
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
 - a. The emission limitation of 5.8 pounds OC/hour (as a monthly average), as determined in condition A.1.;
 - b. The monthly average OC content restrictions for inks, fountain solutions, blanket wash, and cleanup materials, as determined in condition C.3.; and
 - c. The emission limitation of 95.0 tons OC/rolling, 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average temperature at the oxidizer inlet does not comply with the temperature limitation specified in condition B.3. of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports that include a log of the downtime for the capture (collection) system and/or the oxidizer when the emissions

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unit was in operation.

4. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in condition A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation:
5.8 pounds OC/hour (as a monthly average)

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly OC emission limitation from this emissions unit through the record keeping requirements of Sections C.1 and 3.

- b. Emission Limitation:
95.0 tons of OC per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limit based upon the record keeping requirements of Section C.2.

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 the Permits to Operate (PTO).

- b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency (see E.2.c.i) and destruction efficiency (see E.2.c.ii) for OC.

- 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

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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 catalytic oxidizer inlet, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.
3. 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

Emissions Unit ID: **R005**

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

no later than 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.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (R006) - Heatset printing press 390 with thermal oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	8.3 lbs/hr organic compounds (OC)/hour, as a monthly average. See Section A.2.c and A.2.d.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V	OC emissions shall not exceed 95.0 tons per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined. See Section A.2.b.
OAC rule 3745-17-11(B)	See Section A.2.e.
OAC rule 3745-17-07(A)	See Section A.2.f.

2. Additional Terms and Conditions

- 2.a The OC emission limitation of 8.3 pounds/hour (as a monthly average) for emissions unit R006 is 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

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- 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 for Offset Lithographic Printing and Letterpress Printing, EPA-453/R-06-002, September 2006.

- 2.b** The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R005, R006 and R007 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.
- 2.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 B.3. of this permit.
- 2.d** The requirements of this rule also include compliance with the requirements established under OAC rule 3745-31-05(C).
- 2.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.
- 2.f** 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.

B. 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. Fountain solution: 0.25 pound OC /gallon of fountain solution material, as applied;
and
 - c. Cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.

2. The maximum rolling 12-month usage rate of OC containing materials for emissions units R001, R002, R005, R006 and R007 is limited by the following equation:

$$E_M = 3 E_n \#95.0 \text{ tons}$$

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); and

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 where all other variables are the same as described in paragraph C.1.d. below.

3. The average temperature of the combustion chamber of the oxidizer, for any 3-hour block of time when the emissions unit is in operation shall not be less than 1400 degrees Fahrenheit. A lower average temperature requirement may be established if compliance with the minimum destruction efficiency in A.2.c.ii. is demonstrated during emissions testing.

Issued: To be entered upon final issuance**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit R006:
 - 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, 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, 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 inks

$R_n = 0$ 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 inks

Emissions Unit ID: R006

 $C_n = 70$ for fountain solutions $C_n = 40$ for auto blanket wash (cleanup) solvent $C_n = 0$ for hand blanket wash (cleanup) solvent; and

$K =$ destruction efficiency as determined during the performance test as specified in condition E.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 C.1.d).

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hours/month);
- g. The average hourly OC emission 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 rolling, 12-month OC emission rate for emissions units R001, R002, R005, R006 and R007 combined:

- a. The rolling, 12-month 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 OC emissions (tons) as summed from the previous 12 months of monthly OC emissions; and

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

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,

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cleanup material, and blanket wash, as employed in emissions unit R006:

- 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 a continuous temperature monitor and a temperature recorder which measure and record the average temperature within the oxidizer 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:

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- a. All 3-hour blocks of time during which the average temperature within the oxidizer, when the emissions unit was in operation, was less than the temperature limitation specified in condition B.3 of this permit; and
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
 - a. The emission limitation of 8.3 pounds OC/hour (as a monthly average), as determined in condition A.1.;
 - b. The monthly average OC content restrictions for inks, fountain solutions, blanket wash, and cleanup materials, as determined in condition C.3.; and
 - c. The emission limitation of 95.0 tons OC/rolling, 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average temperature at the oxidizer inlet does not comply with the temperature limitation specified in condition B.3. of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports that include a log of the downtime for the capture (collection) system and/or the oxidizer when the emissions unit was in operation.
4. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in condition A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
8.3 pounds OC/hour (as a monthly average)

RR Donnelly Greenfield Division

DTI Application: 05 14428

Facility ID: 0536010011

Emissions Unit ID: R006

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly OC emission limitation from this emissions unit through the record keeping requirements of Sections C.1 and 3.

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- b. Emission Limitation:
95.0 tons of OC per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limit based upon the record keeping requirements of Section C.2.

- 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 the Permits to Operate (PTO).
 - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency (see E.2.c.i) and destruction efficiency (see E.2.c.ii) for OC.
 - 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

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temperature at the catalytic oxidizer inlet, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.

3. 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 no later than 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.

F. Miscellaneous Requirements

None

Emissions Unit ID: R007

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (R007) - Heatset printing press 391 with thermal oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	8.3 lbs/hr organic compounds (OC)/hour, as a monthly average. See Section A.2.c and A.2.d.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V	OC emissions shall not exceed 95.0 tons per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined. See Section A.2.b.
OAC rule 3745-17-11(B)	See Section A.2.e.
OAC rule 3745-17-07(A)	See Section A.2.f.

2. Additional Terms and Conditions

- 2.a The OC emission limitation of 8.3 pounds/hour (as a monthly average) for emissions unit R007 is 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

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the
cloths is 50 percent*.

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

- 2.b** The emissions of OCs shall not exceed 95.0 tons per year, for emissions units R001, R002, R005, R006 and R007 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.
- 2.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 B.3. of this permit.
- 2.d** The requirements of this rule also include compliance with the requirements established under OAC rule 3745-31-05(C).
- 2.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.
- 2.f** 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.

B. 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. Fountain solution: 0.25 pound OC /gallon of fountain solution material, as applied;
and
 - c. Cleanup materials (auto and hand blanket wash): 7.5 pounds OC/gallon of cleanup material, as applied.

2. The maximum rolling 12-month usage rate of OC containing materials for emissions units R001, R002, R005, R006 and R007 is limited by the following equation:

$$E_M = 3 E_n \#95.0 \text{ tons}$$

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); and

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 where all other variables are the same as described in paragraph C.1.d. below.

3. The average temperature of the combustion chamber of the oxidizer, for any 3-hour block of time when the emissions unit is in operation shall not be less than 1400 degrees Fahrenheit. A lower average temperature requirement may be established if compliance with the minimum destruction efficiency in A.2.c.ii. is demonstrated during emissions testing.

C. Monitoring and/or Recordkeeping Requirements

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1. The permittee shall maintain monthly records which list the following information for each graphic arts material (ink, fountain solution, cleanup material, and blanket wash) employed in emissions unit R007:
 - 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, 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, 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 inks

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 inks

C_n = 70 for fountain solutions

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$C_n = 40$ for auto blanket wash (cleanup) solvent
 $C_n = 0$ for hand blanket wash (cleanup) solvent; and

$K =$ destruction efficiency as determined during the performance test as specified in condition E.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 C.1.d).

- f. The number of hours this emissions unit was in operation, when graphic arts materials were being applied or employed (hours/month);
- g. The average hourly OC emission 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 rolling, 12-month OC emission rate for emissions units R001, R002, R005, R006 and R007 combined:
- a. The rolling, 12-month 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 OC emissions (tons) as summed from the previous 12 months of monthly OC emissions; and

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

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,

Emissions Unit ID: R007

cleanup material, and blanket wash, as employed in emissions unit R007:

- 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 a continuous temperature monitor and a temperature recorder which measure and record the average temperature within the oxidizer 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:

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- a. All 3-hour blocks of time during which the average temperature within the oxidizer, when the emissions unit was in operation, was less than the temperature limitation specified in condition B.3 of this permit; and
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify exceedances of any of the following:
 - a. The emission limitation of 8.3 pounds OC/hour (as a monthly average), as determined in condition A.1.;
 - b. The monthly average OC content restrictions for inks, fountain solutions, blanket wash, and cleanup materials, as determined in condition C.3.; and
 - c. The emission limitation of 95.0 tons OC/rolling, 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all 3-hour blocks of time during which the average temperature at the oxidizer inlet does not comply with the temperature limitation specified in condition B.3. of this permit.
3. The permittee shall submit quarterly deviation (excursion) reports that include a log of the downtime for the capture (collection) system and/or the oxidizer when the emissions unit was in operation.
4. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in condition A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
8.3 pounds OC/hour (as a monthly average)

RR Donnelly Greenfield Division

DTI Application: 05 14428

Facility ID: 0536010011

Emissions Unit ID: R007

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly OC emission limitation from this emissions unit through the record keeping requirements of Sections C.1 and 3.

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- b. Emission Limitation:
95.0 tons of OC per rolling, 12-month summation for emissions units R001, R002, R005, R006 and R007 combined.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limit based upon the record keeping requirements of Section C.2.

- 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 the Permits to Operate (PTO).
 - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency (see E.2.c.i) and destruction efficiency (see E.2.c.ii) for OC.
 - 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

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temperature at the catalytic oxidizer inlet, in degrees Fahrenheit, and include this information with the results of the emissions report specified below.

3. 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 no later than 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.

F. Miscellaneous Requirements

None