

Synthetic Minor Determination and/or Netting Determination

Permit To Install 14-05317

A. Source Description:

Quebecor World - Red Bank Division prints magazines, periodicals, and brochures. U.S. EPA recommended changes to the testing and emissions determination sections.

B. Facility Emissions and Attainment Status:

Quebecor World - Red Bank Division, is a minor stationary facility located in Hamilton County, Ohio. Hamilton County is designated as attainment for PM/PM₁₀, SO₂, NO_x and CO and is designated non-attainment for VOC. The permittee requests to incorporate federally enforceable limitations in this PTI limiting the OC and HAP emissions to less than major source thresholds.

C. Source Emissions:

The OC content limitations and the usage limitations will limit the potential emissions to 97.4 TPY for all emissions units combined. The potential HAP emissions will not exceed 9.9 TPY for any individual HAP and 24.9 TPY for combined HAPs. Except for R012, all of the printing presses are controlled by a thermal oxidizer.

D. Conclusion:

The terms and conditions in this permit application will limit the OC emissions to less than 100 TPY and the HAP emissions to 9.9 TPY for any individual HAP and 24.9 TPY for combined HAPs. Compliance with the emissions and usage limitations will be determined based on a rolling, 12-month summation. There is also an OC content limitation for all materials employed. The facility will be required to maintain monthly usage and emission records and submit reports as required by the additional terms and conditions to determine compliance. Because the allowable OC emissions are less than 100 TPY, the permittee will not be subject to the requirements of the Emissions Offset Policy. Also the HAP emissions will be limited to 9.9 TPY for any individual HAP and 24.9 TPY for combined HAPs, thus the facility will be exempt from the MACT requirements.



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

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

Lazarus Gov.
Center

**RE: DRAFT PERMIT TO INSTALL MODIFICATION
HAMILTON COUNTY
Application No: 14-05317**

CERTIFIED MAIL

DATE: 5/27/2003

Quebecor World Red Bank Division
Martin Skerritt
3600 Red Bank Road
Cincinnati, OH 45227

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install modification for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit modification. 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 modification 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, 43266-0149.

A Permit to Install modification 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 modification a fee of \$ 0 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.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

HCDES

Ohio-Kentucky-Indiana Regional Council of Governments

KY

IN

HAMILTON COUNTY

PUBLIC NOTICE

ISSUANCE OF DRAFT PERMIT TO INSTALL **14-05317** FOR AN AIR CONTAMINANT SOURCE FOR **QUEBECOR WORLD RED BANK DIVISION**

On 5/27/2003 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Quebecor World Red Bank Division**, located at **3600 Red Bank Road, Cincinnati, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05317:

Modification of Printing Presses R001, R002, R004, R008, R009 and the sheetfed press, R012.

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.

Harry Schweitering, Hamilton County Department of Environmental Services, 250 William Howard Taft Pkwy, Cincinnati, OH 45219-2660 [(513)946-7777]



**Permit To Install
Terms and Conditions**

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

DRAFT MODIFICATION OF PERMIT TO INSTALL 14-05317

Application Number: 14-05317
APS Premise Number: 1431070458
Permit Fee: **To be entered upon final issuance**
Name of Facility: Quebecor World Red Bank Division
Person to Contact: Martin Skerritt
Address: 3600 Red Bank Road
Cincinnati, OH 45227

Location of proposed air contaminant source(s) [emissions unit(s)]:
**3600 Red Bank Road
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Modification of Printing Presses R001, R002, R004, R008, R009 and the sheetfed press, R012.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

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 quarterly, i.e., 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, 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 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 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

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this 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 source(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	97.4
NOx	13.08
CO	11.59
SO2	0.08
PM/PM10	1.05

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

Applicable Rules/Requirements

R001 - 8 Unit Hantscho Mark Vla
Heatset Web Offset Printing Press -
Modification

OAC rule 3745-31-05(A)(3)

OAC rule 3745-31-05(D)

OAC rule 3745-21-07(G)

OAC rule 3745-17-11(B)

OAC rule 3745-17-07(A)(1)

Quebec

PTI A

Emissions Unit ID: **R001**

Issued: To be entered upon final issuance

<u>Applicable Emissions Limitations/Control Measures</u>	Exempt
See Terms A.2.a, A.2.b, A.2.d. and B.1.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Dryer and oxidizer emissions combined: 0.1 lb/MMBtu NOx 13.08 TPY NOx Total from emissions unit R001, R002, R004, R008 and R009 combined.	Visible particulate emissions shall not exceed 20% opacity as a six-minute average.
0.084 lb/MMBtu CO 11.59 TPY CO Total from emissions unit R001, R002, R004, R008 and R009 combined.	
0.0006 lb/MMBtu SO2 0.08 TPY SO2 Total from emissions unit R001, R002, R004, R008 and R009 combined.	
0.0076 lb/MMBtu PM/PM10 1.05 TPY PM/PM10 Total from emissions unit R001, R002, R004, R008 and R009 combined.	
18.12 TPY OC	
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D)	
See terms A.2.c, A.2.f, A.2.h and B.3.	

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R004, R008 and R009 shall not exceed 57.15 pounds per hour.

2.b Daily organic compound emissions from all emissions units R001, R002, R004, R008, R009 and R012, combined shall not exceed 1408.85 pounds per day.

2.c The following Organic Compound (OC) contents shall not be exceeded for this emissions units:

a.	Ink	50% by wt. OC
b.	Adhesives	1.0 % by wt. OC
c.	Blanket wash	100% by wt. OC
d.	Metering Roller Cleaner	100% by wt. OC
e.	Fountain solution No.1	30% by wt. OC
f.	Fountain solution No.2	85% by wt. OC
g.	Non piling additive	50% by wt. OC
h.	Fountain solution No. 3	35% by wt. OC
i.	Aqueous coatings	2.0% by wt. OC

2.d The permittee shall operate and maintain a thermal oxidizer , at a minimum, 90.0 % (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R004, R008 and R009.

2.e The hourly and/or daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly and/or daily records are required.

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

2.g Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits, the use of a thermal oxidizer with a control efficiency equal to or greater than 90% for OC emissions and compliance with the air toxics policy.

Ink means a liquid material applied by a roll printer. Fountain solution means a surface

Issued: To be entered upon final issuance

coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.3 and the OC contents in term A.2.c (See term E.2 for the calculations).

B. Operational Restrictions

1. The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when emissions units R001, R002, R004, R008 and R009 are in operation shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050
b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8
f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain Solution No. 3*	1.1
i.	Aqueous coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined based on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008, R009 and R012.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009 and R012.
2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink,

Issued: To be entered upon final issuance

adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.

- c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.
3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when emissions units R001, R002, R004, R008 and R009 are in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired

Emissions Unit ID: **R001**

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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
4. The permit to install for this emissions unit (R001) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup

Emissions Unit ID: **R001**

materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

Issued: To be entered upon final issuance

- If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.
- The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.f. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.

Quebe

PTI A

Emissions Unit ID: **R001**

Issued: To be entered upon final issuance

3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in term B.2.

Issued: To be entered upon final issuance

4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coatings from emissions units R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
6. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.c.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 20.0% of the OC's in heatset inks are retained by the substrate, 80.0% goes to the dryer. In addition, there is a 100.0% capture efficiency and a 90.0% control efficiency. All are demonstrated in the following equation:

50% Weight OC content * material usage rate (tons) * (1.0-.20)*(1.0-0.90) = tons of OC

Fountain solution #1 emissions

For fountain solution #1, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

30% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

30% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #1.

Fountain solution #2 emissions

For fountain solution #2, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

85% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

85% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #2.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

2.0% Weight OC content * material usage rate (tons) * (1.0-0.90) = tons of OC

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions as demonstrated in the following equation:

100% Weight OC content * material usage rate (tons)* (1.0-.25) = tons of OC

Quebe

PTI A

Emissions Unit ID: **R001**

Issued: To be entered upon final issuance

Non-piling additive emissions

For non-piling additive, there is a 70.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Quebec

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: R001

Fugitive Emissions

$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for non-piling additive.

Adhesives emissions

For Adhesives, 100% of the emissions are fugitive as demonstrated in the following equation:

$1.0\% \text{ Weight OC content} * \text{material usage rate (tons)} = \text{tons of OC}$

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.40) * (1.0 - 0.90) = \text{tons of OC}$

Fugitive Emissions

$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.60) = \text{tons of OC}$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for auto blanket wash.

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

3. Compliance with the visible particulate emission limitation in term A.1 shall be demonstrated by Method 9, 40 CFR Part 60, Appendix A.
4. Compliance with the percent by weight OC content and the usage limitations shall be determined by the recordkeeping in term C.1.
5. The permittee shall conduct emission testing for the thermal oxidizer for emissions units R001, R002, R004, R008 and R009 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after issuance of the permit for emissions units R001, R002, R004, R008 and R009.

Quebecor World Red Bank Division

PTI A

Issued

Facility ID: 1431070458

Emissions Unit ID: R001

- b. The emission testing shall be conducted to demonstrate compliance with the 90.0 % control efficiency limitation for organics.

Issued: To be entered upon final issuance

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

6. Compliance with the HAP emission limitation in term A.2.f shall be determined by the record keeping in term C.2.
7. Compliance with the PM, SO₂, NO_X and CO limits will be determined by multiplying the fuel usage by the AP-42 emission factor taken from USEPA's AP-42, 5th Edition, Tables 1.4-1 and 1.4-2 dated 7/98.
8. Compliance with the photochemically reactive material limitation shall be demonstrated by the record keeping in term C.1.
9. Compliance with the usage limitation in term B.3 shall be demonstrated by the recordkeeping in

Quebe

PTI A

Issued: To be entered upon final issuance
term C.1.

Emissions Unit ID: **R001**

Quebe

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: **R001**

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2.h, B.1 - B.3, C.1 - C.3, C.5 D.1 - D.7 and E.1- E.9.

Issued

Emissions Unit ID: R002

Applicable Emissions
Limitations/Control Measures

See Terms A.2.a, A.2.b, A.2.d. and B.1.

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NOx

13.08 TPY NOx Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.084 lb/MMBtu CO

11.59 TPY CO Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0006 lb/MMBtu SO2

0.08 TPY SO2 Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0076 lb/MMBtu PM/PM10

1.05 TPY PM/PM10 Total from emissions unit R001, R002, R004, R008 and R009 combined.

18.02 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D) .

See terms A.2.c, A.2.f, A.2.h and B.3.

Exempt

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

Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R004, R008 and R009 shall not exceed 57.15 pounds per hour.

2.b Daily organic compound emissions from all emissions units R001, R002, R004, R008, R009 and R012, combined shall not exceed 1408.85 pounds per day.

2.c The following Organic Compound (OC) contents shall not be exceeded for this emissions unit:

a.	Ink	50% by wt. OC
b.	Adhesives	1.0 % by wt. OC
c.	Blanket wash	100% by wt. OC
d.	Metering Roller Cleaner	100% by wt. OC
e.	Fountain solution No.1	30% by wt. OC
f.	Fountain solution No.2	85% by wt. OC
g.	Non piling additive	50% by wt. OC
h.	Fountain solution No. 3	35% by wt. OC
i.	Aqueous coatings	2.0% by wt. OC

2.d The permittee shall operate and maintain a thermal oxidizer , at a minimum, 90.0 % (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R004, R008 and R009.

Issued: To be entered upon final issuance

- 2.e** The hourly and/or daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly and/or daily records are required.
- 2.f** The allowable emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- 2.g** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits, the use of a thermal oxidizer with a control efficiency equal to or greater than 90% for OC emissions and compliance with the air toxics policy.

Ink means a liquid material applied by a roll printer. Fountain solution means a surface coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.3 and the OC contents in term A.2.c (See term E.2 for the calculations).

B. Operational Restrictions

1. The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when emissions units R001, R002, R004, R008 and R009 are in operation shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050
b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8
f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain Solution No. 3*	1.1
i.	Aqueous coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined based on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008,

Quebe

PTI A

Emissions Unit ID: **R002**

Issued: To be entered upon final issuance

R009 and R012.

- f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009 and R012.

Issued: To be entered upon final issuance

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.
 - c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
- * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be

Quebecor World Red Bank Division

PTI A

Issued

Facility ID: 1431070458

Emissions Unit ID: R002

obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.

Issued: To be entered upon final issuance

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when emissions units R001, R002, R004, R008 and R009 are 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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
4. The permit to install for this emissions unit (R002) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be

Quebe

PTI A

Emissions Unit ID: **R002**

Issued: To be entered upon final issuance

satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

Issued: To be entered upon final issuance

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

Quebecor World Red Bank Division
PTI A
Issued

Facility ID: 1431070458

Emissions Unit ID: R002

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule

Issued: To be entered upon final issuance

3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.

2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.f. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in term B.2.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coatings from emissions units R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
6. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.c.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If

Emissions Unit ID: **R002**

pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 20.0% of the OC's in heatset inks are retained by the substrate, 80.0% goes to the dryer. In addition, there is a 100.0% capture efficiency and a 90.0% control efficiency. All are demonstrated in the following equation:

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0 - .20) * (1.0 - 0.90) = \text{tons of OC}$$

Fountain solution #1 emissions

For fountain solution #1, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #1.

Fountain solution #2 emissions

For fountain solution #2, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$85\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$85\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain

Quebe

PTI A

Emissions Unit ID: **R002**

Issued: To be entered upon final issuance

solution #2.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

2.0% Weight OC content * material usage rate (tons) * (1.0-0.90) = tons of OC

Quebe

PTI A

Emissions Unit ID: **R002**

Issued: To be entered upon final issuance

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions as demonstrated in the following equation:

$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0 - .25) = \text{tons of OC}$

Non-piling additive emissions

For non-piling additive, there is a 70.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

Stack Emissions

$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$

Fugitive Emissions

$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for non-piling additive.

Adhesives emissions

For Adhesives, 100% of the emissions are fugitive as demonstrated in the following equation:

$1.0\% \text{ Weight OC content} * \text{material usage rate (tons)} = \text{tons of OC}$

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.40) * (1.0 - 0.90) = \text{tons of OC}$

Fugitive Emissions

$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.60) = \text{tons of OC}$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for auto blanket wash.

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

Quebecor World Red Bank Division

PTI A

Issued

Facility ID: 1431070458

Emissions Unit ID: R002

3. Compliance with the visible particulate emission limitation in term A.1 shall be demonstrated by Method 9, 40 CFR Part 60, Appendix A.

4. Compliance with the percent by weight OC content and the usage limitations shall be determined by the recordkeeping in term C.1.
5. The permittee shall conduct emission testing for the thermal oxidizer for emissions units R001, R002, R004, R008 and R009 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after issuance of the permit for emissions units R001, R002, R004, R008 and R009.
 - b. The emission testing shall be conducted to demonstrate compliance with the 90.0 % control efficiency limitation for organics.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

Quebe

PTI A

Emissions Unit ID: **R002**

Issued: To be entered upon final issuance

6. Compliance with the HAP emission limitation in term A.2.f shall be determined by the record keeping in term C.2.
7. Compliance with the PM, SO₂, NO_X and CO limits will be determined by multiplying the fuel usage by the AP-42 emission factor taken from USEPA's AP-42, 5th Edition, Tables 1.4-1 and 1.4-2 dated 7/98.
8. Compliance with the photochemically reactive material limitation shall be demonstrated by the record keeping in term C.1.
9. Compliance with the usage limitation in term B.3 shall be demonstrated by the recordkeeping in term C.1.

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2.h, B.1 - B.3, C.1 - C.3, C.5 D.1 - D.7 and E.1- E.9.

Quebe
PTI A

Emissions Unit ID: **R004**

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
R004 - 8 Unit Harris M-1000B Heatset Web Offset Printing Press - Modification	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(D) OAC rule 3745-21-07(G) OAC rule 3745-17-11(B) OAC rule 3745-17-07(A)(1)

Issued

Emissions Unit ID: R004

Applicable Emissions
Limitations/Control Measures

See Terms A.2.a, A.2.b, A.2.d. and B.1.

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NOx

13.08 TPY NOx Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.084 lb/MMBtu CO

11.59 TPY CO Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0006 lb/MMBtu SO2

0.08 TPY SO2 Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0076 lb/MMBtu PM/PM10

1.05 TPY PM/PM10 Total from emissions unit R001, R002, R004, R008 and R009 combined.

18.02 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D) .

See terms A.2.c, A.2.f, A.2.h and B.3.

Exempt

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

Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R004, R008 and R009 shall not exceed 57.15 pounds per hour.

2.b Daily organic compound emissions from all emissions units R001, R002, R004, R008, R009 and R012, combined shall not exceed 1408.85 pounds per day.

2.c The following Organic Compound (OC) contents shall not be exceeded for this emissions unit:

a.	Ink	50% by wt. OC
b.	Adhesives	1.0 % by wt. OC
c.	Blanket wash	100% by wt. OC
d.	Metering Roller Cleaner	100% by wt. OC
e.	Fountain solution No.1	30% by wt. OC
f.	Fountain solution No.2	85% by wt. OC
g.	Non piling additive	50% by wt. OC
h.	Fountain solution No. 3	35% by wt. OC
i.	Aqueous coatings	2.0% by wt. OC

2.d The permittee shall operate and maintain a thermal oxidizer , at a minimum, 90.0 % (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R004, R008 and R009.

Issued: To be entered upon final issuance

- 2.e** The hourly and/or daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly and/or daily records are required.
- 2.f** The allowable emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- 2.g** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits, the use of a thermal oxidizer with a control efficiency equal to or greater than 90% for OC emissions and compliance with the air toxics policy.

Ink means a liquid material applied by a roll printer. Fountain solution means a surface coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.3 and the OC contents in term A.2.c (See term E.2 for the calculations).

B. Operational Restrictions

1. The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when emissions units R001, R002, R004, R008 and R009 are in operation shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050
b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8
f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain Solution No. 3*	1.1
i.	Aqueous coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined based on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008,

Quebe

PTI A

Emissions Unit ID: **R004**

Issued: To be entered upon final issuance

R009 and R012.

- f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009 and R012.

Issued: To be entered upon final issuance

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.
 - c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
- * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be

Quebecor World Red Bank Division

PTI A

Issued

Facility ID: 1431070458

Emissions Unit ID: R004

obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.

Issued: To be entered upon final issuance

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when emissions units R001, R002, R004, R008 and R009 are 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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
4. The permit to install for this emissions unit (R004) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the

Issued: To be entered upon final issuance

permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for

use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.f. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in term B.2.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coatings from emissions units R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
6. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.c.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 20.0% of the OC's in heatset inks are retained by the substrate, 80.0% goes to the dryer. In addition, there is a 100.0% capture efficiency and a 90.0% control efficiency. All are demonstrated in the following equation:

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-.20)*(1.0-0.90) = \text{tons of OC}$$

Fountain solution #1 emissions

For fountain solution #1, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #1.

Fountain solution #2 emissions

For fountain solution #2, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$85\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$85\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #2.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

$$2.0\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.90) = \text{tons of OC}$$

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions

Quebe

PTI A

Issued: To be entered upon final issuance

as demonstrated in the following equation:

Emissions Unit ID: **R004**

Issued: To be entered upon final issuance

100% Weight OC content * material usage rate (tons)* (1.0-.25) = tons of OC

Non-piling additive emissions

For non-piling additive, there is a 70.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

50% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for non-piling additive.

Adhesives emissions

For Adhesives, 100% of the emissions are fugitive as demonstrated in the following equation:

1.0% Weight OC content * material usage rate (tons) = tons of OC

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

100% Weight OC content * material usage rate (tons)* (0.40) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

100% Weight OC content * material usage rate (tons)*(0.60) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for auto blanket wash.

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

3. Compliance with the visible particulate emission limitation in term A.1 shall be demonstrated by Method 9, 40 CFR Part 60, Appendix A.
4. Compliance with the percent by weight OC content and the usage limitations shall be determined

Issued: To be entered upon final issuance

by the recordkeeping in term C.1.

5. The permittee shall conduct emission testing for the thermal oxidizer for emissions units R001, R002, R004, R008 and R009 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after issuance of the permit for emissions units R001, R002, R004, R008 and R009.
 - b. The emission testing shall be conducted to demonstrate compliance with the 90.0 % control efficiency limitation for organics.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

6. Compliance with the HAP emission limitation in term A.2.f shall be determined by the record keeping in term C.2.
7. Compliance with the PM, SO₂, NO_X and CO limits will be determined by multiplying the fuel usage by the AP-42 emission factor taken from USEPA's AP-42, 5th Edition, Tables 1.4-1 and 1.4-2 dated 7/98.
8. Compliance with the photochemically reactive material limitation shall be demonstrated by the record keeping in term C.1.
9. Compliance with the usage limitation in term B.3 shall be demonstrated by the recordkeeping in term C.1.

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2.h, B.1 - B.3, C.1 - C.3, C.5 D.1 - D.7 and E.1- E.9.

Quebe
PTI A

Emissions Unit ID: **R008**

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
R008 - 6 Unit Hantscho mark VI- A1 Heatset Web Offset Printing Press - Modification	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(D)
	OAC rule 3745-21-07(G)
	OAC rule 3745-17-11(B)
	OAC rule 3745-17-07(A)(1)

Issued

Emissions Unit ID: R008

Applicable Emissions Limitations/Control Measures

See Terms A.2.a, A.2.b, A.2.d. and B.1.

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NOx

13.08 TPY NOx Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.084 lb/MMBtu CO

11.59 TPY CO Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0006 lb/MMBtu SO2

0.08 TPY SO2 Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0076 lb/MMBtu PM/PM10

1.05 TPY PM/PM10 Total from emissions unit R001, R002, R004, R008 and R009 combined.

18.06 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D) .

See terms A.2.c, A.2.f, A.2.h and B.3.

Exempt

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

Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R004, R008 and R009 shall not exceed 57.15 pounds per hour.

2.b Daily organic compound emissions from all emissions units R001, R002, R004, R008, R009 and R012, combined shall not exceed 1408.85 pounds per day.

2.c The following Organic Compound (OC) contents shall not be exceeded for this emissions units:

a.	Ink	50% by wt. OC
b.	Adhesives	1.0 % by wt. OC
c.	Blanket wash	100% by wt. OC
d.	Metering Roller Cleaner	100% by wt. OC
e.	Fountain solution No.1	30% by wt. OC
f.	Fountain solution No.2	85% by wt. OC
g.	Non piling additive	50% by wt. OC
h.	Fountain solution No. 3	35% by wt. OC
i.	Aqueous coatings	2.0% by wt. OC

2.d The permittee shall operate and maintain a thermal oxidizer , at a minimum, 90.0 % (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R004, R008 and R009.

Issued: To be entered upon final issuance

- 2.e** The hourly and/or daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly and/or daily records are required.
- 2.f** The allowable emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- 2.g** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits, the use of a thermal oxidizer with a control efficiency equal to or greater than 90% for OC emissions and compliance with the air toxics policy.
- Ink means a liquid material applied by a roll printer. Fountain solution means a surface coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.3 and the OC contents in term A.2.c (See term E.2 for the calculations).

B. Operational Restrictions

1. The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when emissions units R001, R002, R004, R008 and R009 are in operation shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050
b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8
f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain Solution No. 3*	1.1
i.	Aqueous coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined based on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008,

Quebe

PTI A

Emissions Unit ID: **R008**

Issued: To be entered upon final issuance

R009 and R012.

- f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009 and R012.

Issued: To be entered upon final issuance

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.
 - c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
- * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be

Emissions Unit ID: **R008**

obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when emissions units R001, R002, R004, R008 and R009 are 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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
4. The permit to install for this emissions unit (R008) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy"

Issued: To be entered upon final issuance

is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the

Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.f. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in term B.2.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coatings from emissions units R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
6. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.c.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the

Issued: To be entered upon final issuance

General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 20.0% of the OC's in heatset inks are retained by the substrate, 80.0% goes to the dryer. In addition, there is a 100.0% capture efficiency and a 90.0% control efficiency. All are demonstrated in the following equation:

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-.20)*(1.0-0.90) = \text{tons of OC}$$

Fountain solution #1 emissions

For fountain solution #1, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #1.

Fountain solution #2 emissions

For fountain solution #2, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

Emissions Unit ID: **R008**

85% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

85% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #2.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

2.0% Weight OC content * material usage rate (tons) * (1.0-0.90) = tons of OC

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions as demonstrated in the following equation:

100% Weight OC content * material usage rate (tons)* (1.0-.25) = tons of OC

Non-piling additive emissions

For non-piling additive, there is a 70.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

Quebec

PTI A

Emissions Unit ID: **R008**

Issued: To be entered upon final issuance

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

50% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for non-piling additive.

Adhesives emissions

For Adhesives, 100% of the emissions are fugitive as demonstrated in the following equation:

1.0% Weight OC content * material usage rate (tons) = tons of OC

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

100% Weight OC content * material usage rate (tons)* (0.40) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

100% Weight OC content * material usage rate (tons)*(0.60) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for auto blanket wash.

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

3. Compliance with the visible particulate emission limitation in term A.1 shall be demonstrated by Method 9, 40 CFR Part 60, Appendix A.
4. Compliance with the percent by weight OC content and the usage limitations shall be determined by the recordkeeping in term C.1.
5. The permittee shall conduct emission testing for the thermal oxidizer for emissions units R001, R002, R004, R008 and R009 in accordance with the following requirements:

Issued

Emissions Unit ID: **R008**

- a. The emission testing shall be conducted within 3 months after issuance of the permit for emissions units R001, R002, R004, R008 and R009.
- b. The emission testing shall be conducted to demonstrate compliance with the 90.0 % control efficiency limitation for organics.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

6. Compliance with the HAP emission limitation in term A.2.f shall be determined by the record keeping in term C.2.
7. Compliance with the PM, SO₂, NO_x and CO limits will be determined by multiplying the fuel usage by the AP-42 emission factor taken from USEPA's AP-42, 5th Edition, Tables 1.4-1 and 1.4-2 dated 7/98.

Quebe

PTI A

Emissions Unit ID: **R008**

Issued: To be entered upon final issuance

8. Compliance with the photochemically reactive material limitation shall be demonstrated by the record keeping in term C.1.
9. Compliance with the usage limitation in term B.3 shall be demonstrated by the recordkeeping in term C.1.

Quebe

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: **R008**

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2.h, B.1 - B.3, C.1 - C.3, C.5 D.1 - D.7 and E.1- E.9.

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
R009 - 5 Unit Hantscho Heatset Web Offset Printing Press - Modification	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(D)
	OAC rule 3745-21-07(G)
	OAC rule 3745-17-11(B)
	OAC rule 3745-17-07(A)(1)

Issued

Emissions Unit ID: R009

Applicable Emissions Limitations/Control Measures

See Terms A.2.a, A.2.b, A.2.d. and B.1.

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NOx

13.08 TPY NOx Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.084 lb/MMBtu CO

11.59 TPY CO Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0006 lb/MMBtu SO2

0.08 TPY SO2 Total from emissions unit R001, R002, R004, R008 and R009 combined.

0.0076 lb/MMBtu PM/PM10

1.05 TPY PM/PM10 Total from emissions unit R001, R002, R004, R008 and R009 combined.

17.93 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D) .

See terms A.2.c, A.2.f, A.2.h and B.3.

Exempt

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

Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R004, R008 and R009 shall not exceed 57.15 pounds per hour.

2.b Daily organic compound emissions from all emissions units R001, R002, R004, R008, R009 and R012, combined shall not exceed 1408.85 pounds per day.

2.c The following Organic Compound (OC) contents shall not be exceeded for this emissions unit:

a.	Ink	50% by wt. OC
b.	Adhesives	1.0 % by wt. OC
c.	Blanket wash	100% by wt. OC
d.	Metering Roller Cleaner	100% by wt. OC
e.	Fountain solution No.1	30% by wt. OC
f.	Fountain solution No.2	85% by wt. OC
g.	Non piling additive	50% by wt. OC
h.	Fountain solution No. 3	35% by wt. OC
i.	Aqueous coatings	2.0% by wt. OC

2.d The permittee shall operate and maintain a thermal oxidizer , at a minimum, 90.0 % (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R004, R008 and R009.

Issued: To be entered upon final issuance

- 2.e** The hourly and/or daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly and/or daily records are required.
- 2.f** The allowable emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- 2.g** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits, the use of a thermal oxidizer with a control efficiency equal to or greater than 90% for OC emissions and compliance with the air toxics policy.
- Ink means a liquid material applied by a roll printer. Fountain solution means a surface coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.3 and the OC contents in term A.2.c (See term E.2 for the calculations).

B. Operational Restrictions

1. The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when emissions units R001, R002, R004, R008 and R009 are in operation shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050
b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8
f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain Solution No. 3*	1.1
i.	Aqueous coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined based on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008,

Quebe

PTI A

Emissions Unit ID: **R009**

Issued: To be entered upon final issuance

R009 and R012.

- f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009 and R012.

Issued: To be entered upon final issuance

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.
 - c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
- * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be

Emissions Unit ID: **R009**

obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when emissions units R001, R002, R004, R008 and R009 are 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 for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated compliance with the 90.0 percent overall VOC destruction efficiency requirement.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
4. The permit to install for this emissions unit (R009) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy"

Issued: To be entered upon final issuance

is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the

Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.f. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in term B.2.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.
5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coatings from emissions units R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
6. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.c.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the

Issued: To be entered upon final issuance

General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 20.0% of the OC's in heatset inks are retained by the substrate, 80.0% goes to the dryer. In addition, there is a 100.0% capture efficiency and a 90.0% control efficiency. All are demonstrated in the following equation:

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-.20)*(1.0-0.90) = \text{tons of OC}$$

Fountain solution #1 emissions

For fountain solution #1, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.90) = \text{tons of OC}$$

Fugitive Emissions

$$30\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #1.

Fountain solution #2 emissions

For fountain solution #2, there is a 70.0% capture efficiency by the control system and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

Emissions Unit ID: **R009**

85% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

85% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for fountain solution #2.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

2.0% Weight OC content * material usage rate (tons) * (1.0-0.90) = tons of OC

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions as demonstrated in the following equation:

100% Weight OC content * material usage rate (tons)* (1.0-.25) = tons of OC

Non-piling additive emissions

For non-piling additive, there is a 70.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equation:

Issued: To be entered upon final issuance

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

50% Weight OC content * material usage rate (tons)* (0.30) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for non-piling additive.

Adhesives emissions

For Adhesives, 100% of the emissions are fugitive as demonstrated in the following equation:

1.0% Weight OC content * material usage rate (tons) = tons of OC

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 90.0% control efficiency as demonstrated in the following equations:

Stack Emissions

100% Weight OC content * material usage rate (tons)* (0.40) * (1.0 - 0.90) = tons of OC

Fugitive Emissions

100% Weight OC content * material usage rate (tons)*(0.60) = tons of OC

Add the stack emissions to the fugitive emissions to obtain the total OC emissions for auto blanket wash.

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

3. Compliance with the visible particulate emission limitation in term A.1 shall be demonstrated by Method 9, 40 CFR Part 60, Appendix A.
4. Compliance with the percent by weight OC content and the usage limitations shall be determined by the recordkeeping in term C.1.
5. The permittee shall conduct emission testing for the thermal oxidizer for emissions units R001, R002, R004, R008 and R009 in accordance with the following requirements:

Emissions Unit ID: **R009**

- a. The emission testing shall be conducted within 3 months after issuance of the permit for emissions units R001, R002, R004, R008 and R009.
- b. The emission testing shall be conducted to demonstrate compliance with the 90.0 % control efficiency limitation for organics.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

6. Compliance with the HAP emission limitation in term A.2.f shall be determined by the record keeping in term C.2.
7. Compliance with the PM, SO₂, NO_x and CO limits will be determined by multiplying the fuel usage by the AP-42 emission factor taken from USEPA's AP-42, 5th Edition, Tables 1.4-1 and 1.4-2 dated 7/98.

Quebe

PTI A

Emissions Unit ID: **R009**

Issued: To be entered upon final issuance

8. Compliance with the photochemically reactive material limitation shall be demonstrated by the record keeping in term C.1.
9. Compliance with the usage limitation in term B.3 shall be demonstrated by the recordkeeping in term C.1.

Quebe

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: **R009**

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2.h, B.1 - B.3, C.1 - C.3, C.5 D.1 - D.7 and E.1- E.9.

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R012 - Heidelberg Sheetfed Offset Printing Press - Modification	OAC rule 3745-31-05(A)(3)	See Terms A.2.a. and B.1. 6.36 TPY OC The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D)
	OAC rule 3745-31-05(D)	See Terms A.2.b, A.2.c. A.2.f and B.2.
	OAC rule 3745-21-07(G)	Exempt.

2. Additional Terms and Conditions

2.a Daily organic emissions from emissions unit R012 shall not exceed 44.52 pounds per day

2.b The following Organic Compound (OC) contents shall not be exceeded for this emissions unit:

- | | | |
|----|--------------|-----------------|
| a. | Ink | 50% by wt. OC |
| b. | Adhesives | 1.0 % by wt. OC |
| c. | Blanket wash | 100% by wt. OC |

Quebecor World Red Bank Division

PTI A

Issued

Facility ID: 1431070458

Emissions Unit ID: R012

- d. Metering Roller Cleaner 100% by wt. OC
- e. Fountain solution No. 1 30% by wt. OC

Issued: To be entered upon final issuance

f.	Fountain solution No. 2	85% by wt. OC
g.	Fountain solution No. 3	35% by wt. OC
h.	Non piling additive	50% by wt. OC
i.	Aqueous coatings	10% by wt. OC

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

2.d Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the OC content limits, usage limits and compliance with the air toxics policy.

Ink means a liquid material applied by a roll printer. Fountain solution means a surface coating applied to a lithographic plate to render the nonimage areas unreceptive to ink. Coatings, non-piling additive and adhesive means all materials applied onto or saturated within a substrate for decorative, protective or functional purposes. Metering rolling cleaner and blanket wash means all materials used to remove excess printing inks, oils and paper components from press equipment.

2.e The daily emission limitation(s) outlined in this permit are based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no daily records are required.

2.f The combined annual organic compound emissions from emissions units R001, R002, R004, R008, R009 and R012 shall not exceed 97.4 tons per year based on a rolling 12-month summation. This emissions limit is based on usages outlined in term B.2 and the OC contents in term A.2.b (See term E.2 for the calculations).

B. Operational Restrictions

- The use of photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) is prohibited.
- Coating and cleanup material usages for emissions units R001, R002, R004, R008, R009 and R012 combined shall not exceed the following limits:

		Material Usages
		<u>Tons/yr**</u>
a.	Inks	1050

Quebe
PTI A

Emissions Unit ID: **R012**

Issued: To be entered upon final issuance

b.	Blanket wash***	60
c.	Metering Roller Cleaner	6
d.	Fountain solution No. 1*	65
e.	Fountain solution No. 2*	8

Issued: To be entered upon final issuance

f.	Non Piling Additive	10
g.	Adhesives	50
h.	Fountain solution No. 3*	1.1
i.	Aqueous Coatings	9

* This usage limit is for the fountain solution concentrate.

** Compliance with the annual usage limitations shall be determined on a rolling, 12-month summation.

*** Blanket wash includes rubber revitalizer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating for this emissions unit.
 - c. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating employed in this emissions unit.
 - d. A record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as defined in OAC rule 3745-21-01(C)(5).
 - e. The total rolling, 12-month summation of the ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, non piling additive and aqueous coating usage in tons employed for emissions units R001, R002, R004, R008, R009 and R012.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, adhesives, blanket wash (including rubber revitalizer), metering roller cleaners, fountain solutions, non piling additives and aqueous coatings, ovens and thermal oxidizer for emissions units R001, R002, R004, R008, R009

and R012.

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive as applied.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of individual HAP per pound of material, as applied.
 - c. The total combined HAP content of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive in pounds of combined HAPs per pound of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of pounds of each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed.
 - e. The total individual HAP emissions for each HAP from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [for each HAP the sum of (b) times (d)].
 - f. The total combined HAP emissions from all ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons per month [the sum of (c) times (d)].
 - g. The updated rolling, 12-month summation of the individual HAP emissions for each HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.
 - h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from each ink, adhesive, blanket wash (including rubber revitalizer), metering roller cleaner, fountain solution, aqueous coating and non piling additive material employed, in pounds or tons.

Issued: To be entered upon final issuance

- * A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. This information does not have to be kept on a line-by-line basis.
3. The permit to install for this emissions unit (R012) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 1.365 (point), 5.855 (area)

Predicted 1 Hour Maximum Ground-Level Concentration at 36 meters (ug/m3):29.66

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased

exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

Issued: To be entered upon final issuance

- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
4. The permittee shall maintain for this facility all purchase orders and invoices of OC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from their date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in term A.2.c. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each calendar month from emissions units R001, R002, R004, R008, R009 and R012, combined. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in tons from the inks, adhesives, blanket wash(including rubber revitalizer), metering roller cleaner, fountain solution, non piling additives and aqueous coatings for emissions unit R001, R002, R004, R008, R009 and R012, combined for each calendar month. These reports shall be submitted by February 15, May 15, August 15 and November 15 of each year and shall cover the previous calendar quarter. Exceeding the rolling, 12-month limit is a violation for each day of the last month of each 12 month period in which the limit is exceeded, regardless of whether a compliance plan is submitted.

Issued

Emissions Unit ID: R012

- 5. The permittee shall submit deviation reports which identify all exceedances of the OC content limitations in term A.2.b.
- 6. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

- 1. OAC rule 3745-21-10(B) shall be used to determine the OC contents of the inks, fountain solutions, coatings, metering rolling cleaner, non-piling additive, adhesives and blanket wash. If pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or Method 24A cannot be used, the permittee shall notify the Administrator of USEPA and shall use formulation data for the material to demonstrate compliance until USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
- 2. The OC emissions are calculated by multiplying the percent (%) by weight OC content times the material usage rate times the ink retention consistent with the Ohio EPA Engineering Guide #56 times the control efficiency.

Ink emissions

For ink, 95.0% of the OC's in inks are retained by the substrate, 5.0% is fugitive as demonstrated in the following equation:

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.95) = \text{tons of OC}$$

Fountain solution #3 emissions

For fountain solution #3, 100% of the OC's are fugitive as demonstrated in the following equation:

$$35\% \text{ Weight OC content} * \text{material usage rate (tons)} = \text{tons of OC}$$

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive as demonstrated in the following equation:

$$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.25) = \text{tons of OC}$$

Manual Blanket Wash emissions

For Manual Blanket Wash, 50.0% of the OC's are retained by rags, 50.0% is fugitive as demonstrated in the following equation:

Issued: To be entered upon final issuance

100% Weight OC content * material usage rate (tons)* (1.0-0.50) = tons of OC

Compliance with the OC emission limitations shall be determined by the record keeping in term C.1.

3. Compliance with the HAP emission limitation in term A.2.c shall be determined by the record keeping in term C.2.
4. Compliance with the photochemically reactive material limitation as specified in B.1. shall be demonstrated by the record keeping in term C.1.
5. Compliance with the usage limitation as specified in Section B.2 shall be demonstrated by the record keeping in term C.1.

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emission unit contained in permit to install 14-05317 as issued on October 24, 2002.
2. The following terms and conditions are federally enforceable: A.2.a - A.2. f, B.1, B.2, C.1, C.2, C.4, D.1 - D.6 and E.1- E.5.