



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
WARREN COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 14-05281

DATE: 7/10/2003

Quebecor World - Lebanon Division
Marc Alexander
760 Fujitec Drive
Lebanon, OH 45036

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

CC: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 7/10/2003
Effective Date: 7/10/2003**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 14-05281

Application Number: 14-05281
APS Premise Number: 1483060318
Permit Fee: **\$0**
Name of Facility: Quebecor World - Lebanon Division
Person to Contact: Marc Alexander
Address: 760 Fujitec Drive
Lebanon, OH 45036

Location of proposed air contaminant source(s) [emissions unit(s)]:
**760 Fujitec Drive
Lebanon, Ohio**

Description of proposed emissions unit(s):
Administrative Modification to all printing presses.

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

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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

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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).

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- 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 thirty (30) 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	83.85
NOx	28.4
CO	23.8
SO2	0.16
PM/PM10	2.15

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>
R001 - 8 unit Harris (838B) HWOPL with controls - modification	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(D)</p> <p>OAC rule 3745-17-07(A)(1)</p> <p>OAC rule 3745-17-11</p> <p>OAC rule 3745-21-07(G)</p>

Quebec

PTI A

Modification Issued: 7/10/2003

Emissions Unit ID: R001

Applicable Emissions
Limitations/Control Measures

See Terms A.2.b, A.2.c, and A.2.e

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NO_x from the thermal oxidizers and dryers.

28.4 TPY NO_x Total from emissions units R001, R002, R003, R004 and R006, combined.

0.084 lb/MMBtu CO from the thermal oxidizer and dryers.

23.8 TPY CO Total from emissions units R001, R002, R003, R004 and R006, combined.

0.0006 lb/MMBtu SO₂ from the thermal oxidizers and dryers.

0.16 TPY SO₂ Total from emissions units R001, R002, R003, R004 and R006, combined.

0.0076 lb/MMBtu PM/PM₁₀ from the thermal oxidizers and dryers.

0.49 lb/hour PM/PM₁₀ from the thermal oxidizer exhaust.

2.15 TPY PM/PM₁₀ Total from emissions units R001, R002, R003, R004 and R006, combined.

17.1 TPY OC

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

3745-31-05(D).

See terms A.2.d, A.2.g, A.2.h and B.3.

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

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

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

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the operation of a thermal oxidizer with a control efficiency equal to or greater than 95% for OC emissions, emissions and usage limitations 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 non image 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.b** Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R003, R004 and R006, combined shall not exceed 13.11 pounds per hour.
- 2.c** Daily organic compound emissions from each emissions units R001, R002, R003, R004 and R006, combined shall not exceed 1526.5 pounds per day which includes the following limits of 314.5 pounds per day from the oven exhaust and 1212.0 pounds per day from the fugitive emissions associated with the fountain solution, blanket wash, non piling additive and metering roller cleaner.
- 2.d** The following Organic Compound (OC) contents shall not be exceeded for all emissions units:
- | | | |
|----|-------------------------|-------------------------|
| a. | Ink | 49 percent by wt. OC; |
| b. | Aqueous coatings | 14.6 percent by wt. OC; |
| c. | Blanket wash | 100 percent by wt. OC; |
| d. | Metering Roller Cleaner | 100 percent by wt. OC; |
| e. | Fountain solution | 20 percent by wt. OC; |
| f. | Non piling additive | 50 percent by wt. OC |
- 2.e** The permittee shall operate and maintain a thermal oxidizer , at a minimum, 95 percent (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R003, R004 and R006.

- 2.f The hourly emissions limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- 2.g 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 determined based upon a rolling, 12-month summation.
- 2.h The combined annual organic compound emissions from emissions units R001, R002, R003, R004 and R006 shall not exceed 83.85 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.d (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, R003, R004 and R006 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 95.0 percent overall OC destruction efficiency requirement.
- 3. Coating and cleanup material usages for emissions units R001, R002, R003, R004 and R006 combined shall not exceed the following limits:

		Material Usages
		<u>Lbs/yr**</u>
a.	Inks	3,200,000
b.	Blanket wash	100,000
c.	Metering Roller Cleaner	16,800
d.	Fountain solution*	150,000
e.	Non Piling Additive	50,000
f.	Aqueous Coatings	200,000

* This usage limit is for the fountain solution concentrate.

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

summation

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for each emissions unit:
 - a. The company identification of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive for each emissions unit.
 - c. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit. The amount of material allocated to each emission unit will be based on the number of impressions made at each emissions unit. Example calculations are referenced in term and condition E.7.
 - d. A record of each liquid organic material employed in each 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive usage in pounds for emissions units R001, R002, R003, R004 and R006, combined.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, aqueous coatings, blanket wash, metering roller cleaner, fountain solution and non piling additive for emissions units R001, R002, R003, R004 and R006, combined.
 - g. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.
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, aqueous coating, blanket wash (cleanup),

Emissions Unit ID: R001

metering roller cleaner, fountain solution and non piling additive.

- b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of individual HAP per pound of material.
- c. The total combined HAP content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)].
- d. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed.
- e. The total individual HAP emissions for each HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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 all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- i. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.

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, R003, R004 and R006 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 emission test that demonstrated the emissions unit was in compliance with the 95.0% overall OC destruction efficiency requirement; and,
 - 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: Naphthalene

TLV (ug/m3): 52,000

Total Maximum Hourly Emission Rate (lbs/hr): 12.39

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 169.9

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 1238

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.

5. 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 it's 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.
6. 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 emissions units R001, R002, R003, R004 and R006. 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. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs
2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations in term A.2.g. 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 and condition B.2. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each month from emissions units R001, R002, R003, R004 and R006 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.

Emissions Unit ID: **R001**

5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in pounds from the inks, aqueous coatings, blanket wash(cleanup), metering roller cleaner, fountain solution and non piling additives for emission units R001, R002, R003, R004 and R006, 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 and condition A.2.d.
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, 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 95.0% control efficiency. All are demonstrated in the following equation:

$$49\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.20)*(1.0-0.95) = \text{tons of OC}$$

Fountain solution emissions

For fountain solution, there is a 70.0% capture efficiency by the control system and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

Fugitive Emissions

20% 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.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equation:

14.6% Weight OC content * material usage rate (tons) * (1.0-0.95) = 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 95.0% control efficiency as demonstrated in the following equation:

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.95) = 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.

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

100% Weight OC content * material usage rate (tons)* (0.40) * (1.0 - 0.95) = tons of OC

Fugitive Emissions

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

Emissions Unit ID: R001

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

3. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
4. Compliance with the percent by weight OC content and the usage limitations in pounds will be determined by the recordkeeping in Term C.1.
5. Compliance with the HAP emission limitation in term A.2.g shall be determined by the record keeping in Term C.2.
6. Compliance with the PM, SO₂, NO_X and CO limits in Term A.I. shall 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.
7. Compliance with the recordkeeping requirement of keeping monthly usage records for each emissions unit (Term C.1.c) shall be determined by the following example calculation:

$$Q (R001) = Q \text{ total} \times \frac{I (R001)}{I (\text{sum of R001- R004,R006})}$$

Q (R001) = the ink consumed by emission unit R001 for the month.

Q (total) = the total ink used by the permittee for the month.

I (R001) = the total impressions for emissions unit R001 for the month.

I (sum of R001-R004, R006) = the total impressions for emissions units R001, R002, R003, R004 and R006 for the month.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supersede Permit to Install 14-05281 issued on July 11, 2002 for emissions unit R001, R002, R003, R004 and R006.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3., C.5, D. and E.

Applicable Emissions
Limitations/Control Measures

See Terms A.2.b, A.2.c, and A.2.e

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NOx from the thermal oxidizers and dryers.

28.4 TPY NOx Total from emissions units R001, R002, R003, R004 and R006, combined.

0.084 lb/MMBtu CO from the thermal oxidizer and dryers.

23.8 TPY CO Total from emissions units R001, R002, R003, R004 and R006, combined.

0.0006 lb/MMBtu SO2 from the thermal oxidizers and dryers.

0.16 TPY SO2 Total from emissions units R001, R002, R003, R004 and R006, combined.

0.0076 lb/MMBtu PM/PM10 from the thermal oxidizers and dryers.

0.49 lb/hr PM/PM10 from the thermal oxidizer exhaust.

2.15 TPY PM/PM10 Total from emissions units R001, R002, R003, R004 and R006, combined.

17.1 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rules

3745-17-07(A)(1) and 3745-31-05(D).

See terms A.2.d, A.2.g, A.2.h and B.3.

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

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

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

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the operation of a thermal oxidizer with a control efficiency equal to or greater than 95% for OC emissions, emissions and usage limitations 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 non image 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.b** Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R003, R004 and R006, combined shall not exceed 13.11 pounds per hour.
- 2.c** Daily organic compound emissions from each emissions units R001, R002, R003, R004 and R006, combined shall not exceed 1526.5 pounds per day which includes the following limits of 314.5 pounds per day from the oven exhaust and 1212.0 pounds per day from the fugitive emissions associated with the fountain solution, blanket wash, non piling additive and metering roller cleaner.
- 2.d** The following Organic Compound (OC) contents shall not be exceeded for all emissions units:
- | | | |
|----|-------------------------|-------------------------|
| a. | Ink | 49 percent by wt. OC; |
| b. | Aqueous coatings | 14.6 percent by wt. OC; |
| c. | Blanket wash | 100 percent by wt. OC; |
| d. | Metering Roller Cleaner | 100 percent by wt. OC; |
| e. | Fountain solution | 20 percent by wt. OC; |
| f. | Non piling additive | 50 percent by wt. OC |
- 2.e** The permittee shall operate and maintain a thermal oxidizer , at a minimum, 95 percent (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R003, R004 and R006.

- 2.f** The hourly emissions limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- 2.g** 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 determined based upon a rolling, 12-month summation.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R003, R004 and R006 shall not exceed 83.85 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.d (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, R003, R004 and R006 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 95.0 percent overall OC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R003, R004 and R006 combined shall not exceed the following limits:

		Material Usages
		<u>Lbs/yr**</u>
a.	Inks	3,200,000
b.	Blanket wash	100,000
c.	Metering Roller Cleaner	16,800
d.	Fountain solution*	150,000
e.	Non Piling Additive	50,000
f.	Aqueous Coatings	200,000

* This usage limit is for the fountain solution concentrate.

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

summation

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for each emissions unit:
 - a. The company identification of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive for each emissions unit.
 - c. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit. The amount of material allocated to each emission unit will be based on the number of impressions made at each emissions unit. Example calculations are referenced in term and condition E.7.
 - d. A record of each liquid organic material employed in each 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive usage in pounds for emissions units R001, R002, R003, R004 and R006, combined.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, aqueous coatings, blanket wash, metering roller cleaner, fountain solution and non piling additive for emissions units R001, R002, R003, R004 and R006, combined.
 - g. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.
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, aqueous coating, blanket wash (cleanup), metering roller cleaner, fountain solution and non piling additive.

- b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of individual HAP per pound of material.
- c. The total combined HAP content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)].
- d. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed.
- e. The total individual HAP emissions for each HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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 all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- i. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.

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, R003, R004 and R006 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: **R002**

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 emission test that demonstrated the emissions unit was in compliance with the 95.0% overall OC destruction efficiency requirement; and,
 - 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: Naphthalene

TLV (ug/m3): 52,000

Total Maximum Hourly Emission Rate (lbs/hr): 12.39

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 169.9

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 1238

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.

5. 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.
6. 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 emissions units R001, R002, R003, R004 and R006. 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. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs
2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations in term A.2.g. 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 and condition B.2. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each month from emissions units R001, R002, R003, R004 and R006 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.

Modification Issued: 7/10/2003

5. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of total usages in pounds from the inks, aqueous coatings, blanket wash(cleanup), metering roller cleaner, fountain solution and non piling additives for emission units R001, R002, R003, R004 and R006, 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 and condition A.2.d.
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, 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 95.0% control efficiency. All are demonstrated in the following equation:

$$49\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.20)*(1.0-0.95) = \text{tons of OC}$$

Fountain solution emissions

For fountain solution, there is a 70.0% capture efficiency by the control system and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

Fugitive Emissions

20% 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.

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equation:

14.6% Weight OC content * material usage rate (tons) * (1.0-0.95) = 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 95.0% control efficiency as demonstrated in the following equation:

Stack Emissions

50% Weight OC content * material usage rate (tons) * (0.70) * (1.0 - 0.95) = 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.

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

100% Weight OC content * material usage rate (tons)* (0.40) * (1.0 - 0.95) = 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.

3. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
4. Compliance with the percent by weight OC content and the usage limitations in pounds will be determined by the recordkeeping in Term C.1.
5. Compliance with the HAP emission limitation in term A.2.g shall be determined by the record keeping in Term C.2.
6. Compliance with the PM, SO₂, NO_X and CO limits in Term A.I. shall 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.
7. Compliance with the recordkeeping requirement of keeping monthly usage records for each emissions unit (Term C.1.c) shall be determined by the following example calculation:

$$Q (R001) = Q \text{ total} \times \frac{I (R001)}{I (\text{sum of R001- R004,R006})}$$

Q (R001) = the ink consumed by emission unit R001 for the month.

Q (total) = the total ink used by the permittee for the month.

I (R001) = the total impressions for emissions unit R001 for the month.

I (sum of R001-R004, R006) = the total impressions for emissions units R001, R002, R003, R004 and R006 for the month.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supersede Permit to Install 14-05281 issued on July 11, 2002 for emissions unit R001, R002, R003, R004 and R006.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3., C.5, D. and E.

Quebecor World - Lebanon Division

PTI Application: 14-05281

Modif**Facility ID: 1483060318**Emissions Unit ID: **R003**Applicable Emissions
Limitations/Control Measures

See Terms A.2.b, A.2.c, and A.2.e

Dryer and oxidizer emissions
combined:0.1 lb/MMBtu NO_x from the
thermal oxidizers and dryers.
28.4 TPY NO_x Total from
emissions units R001, R002, R003,
R004 and R006, combined.0.084 lb/MMBtu CO from the
thermal oxidizer and dryers.
23.8 TPY CO Total from emissions
units R001, R002, R003, R004 and
R006, combined.0.0006 lb/MMBtu SO₂ from the
thermal oxidizers and dryers.
0.16 TPY SO₂ Total from
emissions units R001, R002, R003,
R004 and R006, combined.0.0076 lb/MMBtu PM/PM₁₀ from
the thermal oxidizers and dryers.
0.49 lb/hour PM/PM₁₀ from the
thermal oxidizer exhaust.
2.15 TPY PM/PM₁₀ Total from
emissions units R001, R002, R003,
R004 and R006, combined.

17.1 TPY OC

The requirements of this rule also
include compliance with the
requirements of OAC rules
3745-17-07(A)(1) and
3745-31-05(D).See terms A.2.d, A.2.g, A.2.h and
B.3.Visible particulate emissions from
any stack shall not exceed 20%
opacity, as a six minute average,
except as specified by rule.The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3).The emission limitation specified by
this rule is less stringent than the
emission limitation established
pursuant to OAC rule
3745-31-05(A)(3).

Modification Issued: 7/10/2003

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the operation of a thermal oxidizer with a control efficiency equal to or greater than 95% for OC emissions, emissions and usage limitations 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 non image 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.b** Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R003, R004 and R006, combined shall not exceed 13.11 pounds per hour.
- 2.c** Daily organic compound emissions from each emissions units R001, R002, R003, R004 and R006, combined shall not exceed 1526.5 pounds per day which includes the following limits of 314.5 pounds per day from the oven exhaust and 1212.0 pounds per day from the fugitive emissions associated with the fountain solution, blanket wash, non piling additive and metering roller cleaner.
- 2.d** The following Organic Compound (OC) contents shall not be exceeded for all emissions units:
- | | | |
|----|-------------------------|-------------------------|
| a. | Ink | 49 percent by wt. OC; |
| b. | Aqueous coatings | 14.6 percent by wt. OC; |
| c. | Blanket wash | 100 percent by wt. OC; |
| d. | Metering Roller Cleaner | 100 percent by wt. OC; |
| e. | Fountain solution | 20 percent by wt. OC; |
| f. | Non piling additive | 50 percent by wt. OC |
- 2.e** The permittee shall operate and maintain a thermal oxidizer , at a minimum, 95 percent (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R003, R004 and R006.

- 2.f** The hourly emissions limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- 2.g** 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 determined based upon a rolling, 12-month summation.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R003, R004 and R006 shall not exceed 83.85 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.d (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, R003, R004 and R006 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 95.0 percent overall OC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R003, R004 and R006 combined shall not exceed the following limits:

		Material Usages
		<u>Lbs/yr**</u>
a.	Inks	3,200,000
b.	Blanket wash	100,000
c.	Metering Roller Cleaner	16,800
d.	Fountain solution*	150,000
e.	Non Piling Additive	50,000
f.	Aqueous Coatings	200,000

* This usage limit is for the fountain solution concentrate.

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

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for each emissions unit:
 - a. The company identification of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive for each emissions unit.
 - c. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit. The amount of material allocated to each emission unit will be based on the number of impressions made at each emissions unit. Example calculations are referenced in term and condition E.7.
 - d. A record of each liquid organic material employed in each 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive usage in pounds for emissions units R001, R002, R003, R004 and R006, combined.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, aqueous coatings, blanket wash, metering roller cleaner, fountain solution and non piling additive for emissions units R001, R002, R003, R004 and R006, combined.
 - g. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.
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, aqueous coating, blanket wash (cleanup),

metering roller cleaner, fountain solution and non piling additive.

- b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of individual HAP per pound of material.
- c. The total combined HAP content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)].
- d. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed.
- e. The total individual HAP emissions for each HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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 all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- i. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.

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, R003, R004 and R006 are in operation. Units shall be in degrees Fahrenheit.

Emissions Unit ID: **R003**

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 emission test that demonstrated the emissions unit was in compliance with the 95.0% overall OC destruction efficiency requirement; and,
 - 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: Naphthalene

TLV (ug/m3): 52,000

Total Maximum Hourly Emission Rate (lbs/hr): 12.39

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 169.9

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 1238

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.

5. 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 it's 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.
6. 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 emissions units R001, R002, R003, R004 and R006. 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. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs
2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations in term A.2.g. 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 and condition B.2. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each month from emissions units R001, R002, R003, R004 and R006 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 pounds from the inks, aqueous coatings, blanket wash(cleanup), metering roller cleaner, fountain solution and non piling additives for emission units R001, R002, R003, R004 and R006, 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 and condition A.2.d.
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, 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 95.0% control efficiency. All are demonstrated in the following equation:

$$49\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.20)*(1.0-0.95) = \text{tons of OC}$$

Fountain solution emissions

For fountain solution, there is a 70.0% capture efficiency by the control system and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

Fugitive Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

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

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equation:

$$14.6\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0 - 0.95) = \text{tons of OC}$$

Metering Rolling Cleaner emissions

For Metering Rolling Cleaner, 25.0% of the OC's are retained by rags, 75.0% is fugitive emissions 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 95.0% control efficiency as demonstrated in the following equation:

Stack Emissions

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

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.

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.40) * (1.0 - 0.95) = \text{tons of OC}$$

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.

3. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
4. Compliance with the percent by weight OC content and the usage limitations in pounds will be determined by the recordkeeping in Term C.1.
5. Compliance with the HAP emission limitation in term A.2.g shall be determined by the record keeping in Term C.2.

6. Compliance with the PM, SO₂, NO_X and CO limits in Term A.I. shall 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.

7. Compliance with the recordkeeping requirement of keeping monthly usage records for each emissions unit (Term C.1.c) shall be determined by the following example calculation:

$$Q (R001) = Q \text{ total} \times \frac{I (R001)}{I (\text{sum of R001- R004,R006})}$$

Q (R001) = the ink consumed by emission unit R001 for the month.

Q (total) = the total ink used by the permittee for the month.

I (R001) = the total impressions for emissions unit R001 for the month.

I (sum of R001-R004, R006) = the total impressions for emissions units R001, R002, R003, R004 and R006 for the month.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supersede Permit to Install *14-05281* issued on July 11, 2002 for emissions unit R001, R002, R003, R004 and R006.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3., C.5, D. and E.

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 (838E) HWOPL with controls - Modification	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(D)</p> <p>OAC rule 3745-17-07(A)(1)</p> <p>OAC rule 3745-17-11</p> <p>OAC rule 3745-21-07(G)</p>

Quebec

PTI A

Modification Issued: 7/10/2003

Emissions Unit ID: R004

Applicable Emissions
Limitations/Control Measures

See Terms A.2.b, A.2.c, and A.2.e

Dryer and oxidizer emissions
 combined:

0.1 lb/MMBtu NO_x from the
 thermal oxidizers and dryers.

28.4 TPY NO_x Total from
 emissions units R001, R002, R003,
 R004 and R006, combined.

0.084 lb/MMBtu CO from the
 thermal oxidizer and dryers.

23.8 TPY CO Total from emissions
 units R001, R002, R003, R004 and
 R006, combined.

0.0006 lb/MMBtu SO₂ from the
 thermal oxidizers and dryers.

0.16 TPY SO₂ Total from
 emissions units R001, R002, R003,
 R004 and R006, combined.

0.0076 lb/MMBtu PM/PM₁₀ from
 the thermal oxidizers and dryers.

0.49 lb/hour PM/PM₁₀ from the
 thermal oxidizer exhaust.

2.15 TPY PM/PM₁₀ Total from
 emissions units R001, R002, R003,
 R004 and R006, combined.

17.1 TPY OC

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

3745-31-05(D).

See terms A.2.d, A.2.g, A.2.h and
 B.3.

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

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

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

Modification Issued: 7/10/2003

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the operation of a thermal oxidizer with a control efficiency equal to or greater than 95% for OC emissions, emissions and usage limitations 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 non image 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.b Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R003, R004 and R006, combined shall not exceed 13.11 pounds per hour.

2.c Daily organic compound emissions from each emissions units R001, R002, R003, R004 and R006, combined shall not exceed 1526.5 pounds per day which includes the following limits of 314.5 pounds per day from the oven exhaust and 1212.0 pounds per day from the fugitive emissions associated with the fountain solution, blanket wash, non piling additive and metering roller cleaner.

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

- a. Ink 49 percent by wt. OC;
- b. Aqueous coatings 14.6 percent by wt. OC;
- c. Blanket wash 100 percent by wt. OC;
- d. Metering Roller Cleaner 100 percent by wt. OC;
- e. Fountain solution 20 percent by wt. OC;
- f. Non piling additive 50 percent by wt. OC

2.e The permittee shall operate and maintain a thermal oxidizer , at a minimum, 95 percent (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R003, R004 and R006.

- 2.f** The hourly emissions limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- 2.g** 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 determined based upon a rolling, 12-month summation.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R003, R004 and R006 shall not exceed 83.85 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.d (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, R003, R004 and R006 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 95.0 percent overall OC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R003, R004 and R006 combined shall not exceed the following limits:

		Material Usages
		<u>Lbs/yr**</u>
a.	Inks	3,200,000
b.	Blanket wash	100,000
c.	Metering Roller Cleaner	16,800
d.	Fountain solution*	150,000
e.	Non Piling Additive	50,000
f.	Aqueous Coatings	200,000

* This usage limit is for the fountain solution concentrate.

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

summation

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for each emissions unit:
 - a. The company identification of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive for each emissions unit.
 - c. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit. The amount of material allocated to each emission unit will be based on the number of impressions made at each emissions unit. Example calculations are referenced in term and condition E.7.
 - d. A record of each liquid organic material employed in each 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive usage in pounds for emissions units R001, R002, R003, R004 and R006, combined.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, aqueous coatings, blanket wash, metering roller cleaner, fountain solution and non piling additive for emissions units R001, R002, R003, R004 and R006, combined.
 - g. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.
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, aqueous coating, blanket wash (cleanup),

metering roller cleaner, fountain solution and non piling additive.

- b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of individual HAP per pound of material.
- c. The total combined HAP content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)].
- d. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed.
- e. The total individual HAP emissions for each HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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 all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- i. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.

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, R003, R004 and R006 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 emission test that demonstrated the emissions unit was in compliance with the 95.0% overall OC destruction efficiency requirement; and,
 - 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: Naphthalene

TLV (ug/m3): 52,000

Total Maximum Hourly Emission Rate (lbs/hr): 12.39

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 169.9

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 1238

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.

5. 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 it's 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.
6. 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 emissions units R001, R002, R003, R004 and R006. 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. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs
2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations in term A.2.g. 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 and condition B.2. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each month from emissions units R001, R002, R003, R004 and R006 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 pounds from the inks, aqueous coatings, blanket wash(cleanup), metering roller cleaner, fountain solution and non piling additives for emission units R001, R002, R003, R004 and R006, 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 and condition A.2.d.
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, 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 95.0% control efficiency. All are demonstrated in the following equation:

$$49\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.20)*(1.0-0.95) = \text{tons of OC}$$

Fountain solution emissions

For fountain solution, there is a 70.0% capture efficiency by the control system and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

Fugitive Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

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

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equation:

$$14.6\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0 - 0.95) = \text{tons of OC}$$

Metering Rolling Cleaner emissions

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

emissions 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 95.0% control efficiency as demonstrated in the following equation:

Stack Emissions

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

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.

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.40) * (1.0 - 0.95) = \text{tons of OC}$$

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.

3. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
4. Compliance with the percent by weight OC content and the usage limitations in pounds will be determined by the recordkeeping in Term C.1.
5. Compliance with the HAP emission limitation in term A.2.g shall be determined by the record keeping in Term C.2.
6. Compliance with the PM, SO₂, NO_x and CO limits in Term A.I. shall be determined by

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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.

7. Compliance with the recordkeeping requirement of keeping monthly usage records for each emissions unit (Term C.1.c) shall be determined by the following example calculation:

$$Q (R001) = Q \text{ total} \times \frac{I (R001)}{I (\text{sum of R001- R004,R006})}$$

Q (R001) = the ink consumed by emission unit R001 for the month.

Q (total) = the total ink used by the permittee for the month.

I (R001) = the total impressions for emissions unit R001 for the month.

I (sum of R001-R004, R006) = the total impressions for emissions units R001, R002, R003, R004 and R006 for the month.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supersede Permit to Install 14-05281 issued on July 11, 2002 for emissions unit R001, R002, R003, R004 and R006.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3., C.5, D. and E.

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Modification Issued: 7/10/2003

Emissions Unit ID: R006

Applicable Emissions
Limitations/Control Measures

See Terms A.2.b, A.2.c, and A.2.e

Dryer and oxidizer emissions combined:

0.1 lb/MMBtu NO_x from the thermal oxidizers and dryers.

28.4 TPY NO_x Total from emissions units R001, R002, R003, R004 and R006, combined.

0.084 lb/MMBtu CO from the thermal oxidizer and dryers.

23.8 TPY CO Total from emissions units R001, R002, R003, R004 and R006, combined

0.0006 lb/MMBtu SO₂ from the thermal oxidizers and dryers.

0.16 TPY SO₂ Total from emissions units R001, R002, R003, R004 and R006, combined.

0.0076 lb/MMBtu PM/PM₁₀ from the thermal oxidizers and dryers.

0.49 lb/hour PM/PM₁₀ from the thermal oxidizer exhaust.

2.15 TPY PM/PM₁₀ Total from emissions units R001, R002, R003, R004 and R006, combined.

17.1 TPY OC

The requirements of this rule also include compliance with the requirements of OAC rules

3745-17-07(A)(1) and 3745-31-05(D).

See terms A.2.d, A.2.g, A.2.h and B.3.

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

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

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

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the operation of a thermal oxidizer with a control efficiency equal to or greater than 95% for OC emissions, emissions and usage limitations 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 non image 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.b** Combined organic compound emissions from the oxidizer exhaust of emissions units R001, R002, R003, R004 and R006, combined shall not exceed 13.11 pounds per hour.
- 2.c** Daily organic compound emissions from each emissions units R001, R002, R003, R004 and R006, combined shall not exceed 1526.5 pounds per day which includes the following limits of 314.5 pounds per day from the oven exhaust and 1212.0 pounds per day from the fugitive emissions associated with the fountain solution, blanket wash, non piling additive and metering roller cleaner.
- 2.d** The following Organic Compound (OC) contents shall not be exceeded for all emissions units:
- | | | |
|----|-------------------------|-------------------------|
| a. | Ink | 49 percent by wt. OC; |
| b. | Aqueous coatings | 14.6 percent by wt. OC; |
| c. | Blanket wash | 100 percent by wt. OC; |
| d. | Metering Roller Cleaner | 100 percent by wt. OC; |
| e. | Fountain solution | 20 percent by wt. OC; |
| f. | Non piling additive | 50 percent by wt. OC |
- 2.e** The permittee shall operate and maintain a thermal oxidizer , at a minimum, 95 percent (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the oven exhaust for emissions units R001, R002, R003, R004 and R006.

- 2.f** The hourly emissions limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- 2.g** 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 determined based upon a rolling, 12-month summation.
- 2.h** The combined annual organic compound emissions from emissions units R001, R002, R003, R004 and R006 shall not exceed 83.85 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.d (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, R003, R004 and R006 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 95.0 percent overall OC destruction efficiency requirement.
3. Coating and cleanup material usages for emissions units R001, R002, R003, R004 and R006 combined shall not exceed the following limits:

		Material Usages
		<u>Lbs/yr**</u>
a.	Inks	3,200,000
b.	Blanket wash	100,000
c.	Metering Roller Cleaner	16,800
d.	Fountain solution*	150,000
e.	Non Piling Additive	50,000
f.	Aqueous Coatings	200,000

* This usage limit is for the fountain solution concentrate.

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

summation

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for each emissions unit:
 - a. The company identification of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit.
 - b. The percent (%) by weight of the organic compound content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive for each emissions unit.
 - c. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed in each emissions unit. The amount of material allocated to each emission unit will be based on the number of impressions made at each emissions unit. Example calculations are referenced in term and condition E.7.
 - d. A record of each liquid organic material employed in each 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive usage in pounds for emissions units R001, R002, R003, R004 and R006, combined.
 - f. The total rolling, 12-month summation of the controlled Organic Compound (OC) emissions in tons per year from the inks, aqueous coatings, blanket wash, metering roller cleaner, fountain solution and non piling additive for emissions units R001, R002, R003, R004 and R006, combined.
 - g. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.
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, aqueous coating, blanket wash (cleanup), metering roller cleaner, fountain solution and non piling additive.

- b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of individual HAP per pound of material.
- c. The total combined HAP content of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive in pounds of combined HAPs per pound of material [sum all the individual HAP contents from (b)].
- d. The number of pounds of each ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed.
- e. The total individual HAP emissions for each HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive 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 all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- h. The updated rolling, 12-month summation of the combined HAP emissions for all HAP from all ink, aqueous coating, blanket wash, metering roller cleaner, fountain solution and non piling additive employed, in pounds or tons.
- i. All materials employed by the permittee shall be recorded and reported as applied except for the fountain solution and the non-piling additive, which shall be recorded and reported as concentrate.

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, R003, R004 and R006 are in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired

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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 emission test that demonstrated the emissions unit was in compliance with the 95.0% overall OC destruction efficiency requirement; and,
 - 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: Naphthalene

TLV (ug/m3): 52,000

Total Maximum Hourly Emission Rate (lbs/hr): 12.39

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 169.9

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 1238

Physical changes to or in the method of operation of the emissions unit after its 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.

5. 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.
6. 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 emissions units R001, R002, R003, R004 and R006. 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. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs
2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations in term A.2.g. 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 and condition B.2. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit quarterly reports which specify the updated rolling, 12-month summation of organic compound emissions in TPY for each month from emissions units R001, R002, R003, R004 and R006 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 pounds from the inks, aqueous coatings, blanket wash(cleanup), metering roller cleaner, fountain solution and non piling additives for emission units R001, R002, R003, R004 and R006, 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 and condition A.2.d.
7. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

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Emissions Unit ID: **R006**

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, 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 95.0% control efficiency. All are demonstrated in the following equation:

$$49\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.20)*(1.0-0.95) = \text{tons of OC}$$

Fountain solution emissions

For fountain solution, there is a 70.0% capture efficiency by the control system and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

Fugitive Emissions

$$20\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.30) = \text{tons of OC}$$

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

Aqueous Coatings emissions

For aqueous coatings, there is a 100.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equation:

$$14.6\% \text{ Weight OC content} * \text{material usage rate (tons)} * (1.0-0.95) = \text{tons of OC}$$

Metering Rolling Cleaner emissions

Emissions Unit ID: R006

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 95.0% control efficiency as demonstrated in the following equation:

Stack Emissions

$$50\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.70) * (1.0 - 0.95) = \text{tons of OC}$$

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.

Auto Blanket Wash emissions

For Auto Blanket Wash, there is a 40.0% capture efficiency and a 95.0% control efficiency as demonstrated in the following equations:

Stack Emissions

$$100\% \text{ Weight OC content} * \text{material usage rate (tons)} * (0.40) * (1.0 - 0.95) = \text{tons of OC}$$

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.

3. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
4. Compliance with the percent by weight OC content and the usage limitations in pounds will be determined by the recordkeeping in Term C.1.
5. Compliance with the HAP emission limitation in term A.2.g shall be determined by the record keeping in Term C.2.
6. Compliance with the PM, SO₂, NO_x and CO limits in Term A.I. shall 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.

7. Compliance with the recordkeeping requirement of keeping monthly usage records for each emissions unit (Term C.1.c) shall be determined by the following example calculation:

$$Q (R001) = Q \text{ total} \times \frac{I (R001)}{I (\text{sum of R001- R004,R006})}$$

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Q (R001) = the ink consumed by emission unit R001 for the month.

Q (total)= the total ink used by the permittee for the month.

I (R001) = the total impressions for emissions unit R001 for the month.

I (sum of R001-R004, R006) = the total impressions for emissions units R001, R002, R003, R004 and R006 for the month.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supersede Permit to Install 14-05281 issued on July 11, 2002 for emissions unit R001, R002, R003, R004 and R006.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3., C.5, D. and E.