



State of Ohio Environmental Protection Agency

Street Address:

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

Mailing Address:

Lazarus Gov. Center

**RE: DRAFT PERMIT TO INSTALL  
HAMILTON COUNTY  
Application No: 14-04841**

**CERTIFIED MAIL**

**DATE:** 2/9/00

CJ Krehbiel Co  
John Krehbiel  
3962 Virginia Ave  
Cincinnati, OH 45227

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1200** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA  
Indiana

HCDES  
Kentucky

OH-KY-IN Regional Council of Governments



**Permit To Install  
Terms and Conditions**

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

**DRAFT PERMIT TO INSTALL 14-04841**

Application Number: 14-04841  
APS Premise Number: 1431070992  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: CJ Krehbiel Co  
Person to Contact: John Krehbiel  
Address: 3962 Virginia Ave  
Cincinnati, OH 45227

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**3962 Virginia Ave  
Cincinnati, Ohio**

Description of proposed emissions unit(s):  
**4-heatset web offset presses with dryers & 1 - non-heatset sheet-fed offset press with dryer, Chapter 31 Modification units R001, R005, R007.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

\_\_\_\_\_  
Director

**CJ Krehbiel Co**  
**PTI Application: 14-04841**  
**Issued: To be entered upon final issuance**

**Facility ID: 1431070992**

**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 Related to Monitoring and Recordkeeping 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

**CJ Krehbiel Co**  
**PTI Application: 14-04841**

**Facility ID: 1431070992**

**Issued: To be entered upon final issuance**

facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate 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 prove to be inadequate 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

**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**

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

**14. Construction Compliance Certification**

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

**15. Fees**

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

**B. Permit to Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	91.67
PM/PM10	9.64

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

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Heatset web offset press with dryer - Cottrell I	OAC rule 3745-35-07(B)	770.06 lbs/day OC for R001
		0.551 lb/hr PM/PM10
		2.41 TPY PM/PM10
		32.48 TPY OC
		32.48 TPY OC, based upon a rolling, 12-month summation
		See Sections A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e. and A.2.2.f.
	OAC rule 3745-17-11(A)	The limit based on this rule is less stringent than the limit established pursuant to OAC rule 3745-35-07(B) above.
		See Section A.2.2.c.
		See Section B.1.
		See Part I, Term A.7.
	OAC rule 3745-17-07(A)	
	OAC rule 3745-21-07(G)	
	OAC rule 3745-15-07	

**2. Additional Terms and Conditions**

- 2.a The total allowable usage\* 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 limitation shall be based on a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall not exceed the HAPs usage limits specified in the following table:

<u>Month(s)</u>	<u>In Tons</u>	<u>Maximum Allowable Single HAP Usage</u>	<u>Maximum Allowable Combined HAP Usage</u>
1		0.8	2.1
1-2		1.7	4.2
1-3		2.5	6.2
1-4		3.3	8.3
1-5		4.2	10.4
1-6		5.0	12.5
1-7		5.8	14.6
1-8		6.6	16.6

**CJ K  
PTI**

Emissions Unit ID: **R001**

**Issued: To be entered upon final issuance**

1-9	7.5	18.7
1-10	8.3	20.8
1-11	9.1	22.9
1-12	9.9	24.9

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual HAPs usage limits shall be based upon a rolling, 12-month summation of the HAP(s) usage\* figures.

\*The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

- 2.b** The maximum organic compound content of the coatings, fountain solutions, and cleanup materials, as applied, shall not exceed the following:

Ink		45% by weight OC
Fountain Solution	0.21 lb OC/gallon	
Blanket Wash	6.6	lbs OC/gallon

- 2.c** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.

- 2.d** The maximum annual ink usage for this emissions unit shall not exceed 120,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the ink usage levels specified in the following table:

<u>Month(s)</u>	<u>in pounds</u>	<u>Maximum Allowable Cumulative Ink Usage.</u>
1		10,000
1-2		20,000
1-3		30,000
1-4		40,000
1-5		50,000
1-6		60,000
1-7		70,000
1-8		80,000
1-9		90,000
1-10		100,000
1-11		110,000
1-12		120,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual ink usage limitation shall be based upon a rolling, 12-month summation of the ink usage figures.

- 2.e** The maximum annual fountain solution usage for this emissions unit shall not exceed 80,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fountain solution usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>	<u>Maximum Allowable Cumulative Fountain Solution</u>
1		6,667
1-2		13,334
1-3		20,001
1-4		26,668
1-5		33,335
1-6		40,002
1-7		46,669
1-8		53,336
1-9		60,003

CJ Krehbiel Co

PTI License # 14 04841

Issue

Facility ID: 1431070992

Emissions Unit ID: R001

1-10	66,670
1-11	73,337
1-12	80,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual fountain solution usage limitation shall be based upon a rolling, 12-month summation of the fountain solution usage figures.

- 2.f** The maximum annual blanket wash material usage for this emissions unit shall not exceed 1,500 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the blanket wash material usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Blanket Wash	
	Usage, in gallons	
1	250	
1-2	350	
1-3	450	
1-4	550	
1-5	650	
1-6	750	
1-7	875	
1-8	1,000	
1-9	1,125	
1-10	1,250	
1-11	1,375	
1-12	1,500	

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual blanket wash material usage limitation shall be based upon a rolling, 12-month summation of the blanket wash material usage figures.

- 2.g** The daily emission limitation outlined for coatings and fountain solutions are based upon the emissions units' PTE at 24 hours per day. Therefore, no daily records are required to demonstrate compliance with this limit.
- 2.h** Daily, monthly, and annual emissions rates in this permit are subject to revision should any of the listed emissions units be withdrawn.

## B. Operational Restrictions

- The use of photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit R001.  
Prior to employing any photochemically reactive material in this emissions unit, including any cleanup material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.
- The maximum daily cleanup material usage for emissions unit R001 shall not exceed 10 gallons per day.
- To ensure that the evaporative OC/VOC loss from the hand cleanup process does not exceed more than 50% (by weight), all rags utilized in the cleanup process shall be stored in containers with tight fitting covers.

## C. Monitoring and/or Recordkeeping Requirements

- The permittee shall collect and record the following information each month for the entire facility:
  - The name and identification number of all coatings and each fountain solution, employed;
  - The individual Hazardous Air Pollutant (HAP) content for each HAP of all coatings and each fountain solution in pounds of individual HAP per gallon of coating (or fountain solution), as applied;
  - The total combined HAP content of all coatings and each fountain solution in pounds of combined HAPs per gallon of coating (or fountain solution), as applied [sum all the individual HAP contents from (b)];

- d. The number of gallons of all coatings and each fountain solution employed;
- e. The name and identification of each cleanup material employed;
- f. The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
- g. The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
- h. The number of gallons of each cleanup material employed;
- i. The total individual HAP usage for each HAP from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating and fountain solution plus the sum of (f) times (h) for each cleanup material];
- j. The total combined HAP usage\* from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating and fountain solution plus the sum of (g) times (h) for each cleanup material];
- k. The updated rolling, 12-month summation of usage\* for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI; and
- l. The updated rolling, 12-month summation of usage\* for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

\*\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

\*\*\* Inks may be recorded in pounds HAP per pound ink and annual HAP emissions calculated using:

$$E = \text{Lbs. ink employed per month} \times \text{HAP fraction of ink by wt.} = \text{Lbs. HAPs/Month}$$

\*\*\*\* Fountain solutions, aqueous coatings, and cleanup material may be recorded in pounds HAP per gallon of material and annual HAP emissions calculated using:

$$E = \text{Lbs. HAP per gallon material} \times \text{No. of gallons employed per month} = \text{Lbs. HAPs/Month}$$

2. The permittee shall collect and record the following information each day for cleanup materials employed in this emissions unit:
  - a. The company identification (including product name per MSDSs) for each cleanup material employed.
  - b. Documentation on whether or not each cleanup material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of gallons of each cleanup material employed.
  - d. The organic compound content of each cleanup material, as applied.
3. The permittee shall collect and record the following information each month for each material employed in each emissions unit:
  - a. The company identification for each coating, fountain solution, and cleanup material employed.
  - b. A record of each coating and fountain solution employed in this emissions unit indicating whether or not the coating or fountain solution is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of pounds and gallons of each coating and fountain solution employed, respectively.
  - d. The organic compound content of each coating and fountain solution in pounds per pound, and pounds per gallon, respectively.
  - e. The organic compound emission rate for each coating, fountain solution, and cleanup material, in pounds or tons per month.

**CJ K  
PTI**

Emissions Unit ID: **R001**

**Issued: To be entered upon final issuance**

- f. The total organic compound emission rate for all coatings, fountain solutions, and cleanup materials, in pounds or tons per month.
- g. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative organic compound emissions for each calendar month.
- h. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month total organic compound emissions rate for all coatings, fountain solutions, and cleanup materials, in tons per year.
- i. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative usage figures for each material employed (See Sections A.2.2.d. through A.2.2.f.) for each calendar month.
- j. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month summation of the coating, fountain solution and cleanup material usage figures, in gallons per year. (See Sections A.2.2.d. through A.2.2.f.)

Note: The coating information must be for the coatings as applied, including any thinning solvents or catalysts added at the emissions unit. Also, the definitions of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).

**D. Reporting Requirements**

- 1. The permittee shall submit an annual report which identifies each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted by January 31 of each year and shall cover the previous calendar year.
- 2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in this Permit to Install. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
- 3. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R001. These reports shall be submitted by January 31 of each year.
- 4. The permittee shall submit quarterly deviation (excursion) reports which identify:
  - a. Any exceedances of cleanup material usage or emissions limit in this permit (e.g., 10 gallons per day cleanup for emissions unit R001).
  - b. All exceedances of the OC content limits delineated in Section A.2.2.b.
  - c. All exceedances of the rolling, 12-month usage limitations for all materials employed and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative materials usage rates limits. (See Sections A.2.2.d. through A.2.2.f.)
  - d. All exceedances of the rolling, 12-month OC emission limitation.
- 5. 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. Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):

**CJ Krehbiel Co**

PTI / 14 04 11

**Issue****Facility ID: 1431070992****Emissions Unit ID: R001**

- a. Emission Limitation:  
770.06 lbs/day OC for emissions unit R001
- Applicable Compliance Method:  
Compliance for the inks and fountain solutions shall be based on multiplying the maximum daily usage rates (1920 pounds/day and 218.4 gallons/day, respectively) by the maximum OC contents (45% OC by weight and 0.21 lbs/gallon, respectively) and adding their results to the daily OC emissions from the cleanup materials (as determined by the record keeping requirements specified in Section C.2.).
- b. Emission Limitation:  
0.551 lb/hr PM/PM10
- Applicable Compliance Method:  
If testing is required to demonstrate compliance with the allowable emission limitation of 0.551 pound PM/PM10 per hour, then testing shall be conducted using the following method: Method 5, 40 CFR Part 60, Appendix A.
- c. Emission Limitation:  
2.41 TPY PM/PM10
- Applicable Compliance Method:  
The 2.41 TPY limitation was developed by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.
- d. Emission Limitation:  
32.48 TPY OC
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
- e. Emission Limitation:  
32.48 TPY OC, based upon a rolling, 12-month summation
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
- f. Emission Limitation:  
HAPs emissions 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1.
- g. Organic Compound Content Limitations:  
Ink: 45% by weight OC  
Fountain Solution: 0.21 lb OC/gallon  
Blanket Wash: 6.6 lbs OC/gallon
- Applicable Compliance Method:  
Formulation data or USEPA method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks and coatings.
- h. Compliance with the usage rate limitations for all materials employed (see Sections A.2.2.d. through A.2.2.f.) shall be based upon the record keeping requirements specified in Section C.3.
- i. Compliance with the daily cleanup material usage rate limitation specified in Section B.2. shall be based upon the record keeping requirements specified in Section C.2.
2. The OC emission rate for inks is calculated on a "worst case" basis for the ink with the highest OC content as follows:  
$$E = \text{OC content of the ink (in pounds OC/pounds ink)} \times \text{pounds of ink employed per unit time} \times 1\text{-\%retention.}$$
3. The OC emission rate for fountain solutions and cleanup materials shall be based on OC content information from the manufacturer and is calculated as follows:  
$$E = \text{OC content of the fountain solution or cleanup material (pounds per gallon)} \times \text{gallons employed per unit time} \times 1\text{-\%retention.}$$

**CJ Krehbiel Co**  
**PTI**  
**Issue**

**Facility ID: 1431070992**

**Emissions Unit ID: R001**

4. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

**F. Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable, pursuant to OAC rule 3745-35-07(B): A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f., B.1., C.1., C.2., C.3., D.1., D.2. and D.4.
2. For all inks employed in this emissions unit, the worst case OC content can be used to calculate emissions.

**CJ K  
PTI**

Emissions Unit ID: **R005**

**Issued: To be entered upon final issuance**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Heatset web offset press with dryer and regenerative thermal oxidizer (RTO) - Cottrell III (modification)	OAC rule 3745-31-05 (A)(3)	105.09 lbs/day OC for R005 0.551 lb/hr PM/PM10 2.41 TPY PM/PM10  10.12 TPY OC
	OAC rule 3745-31-05(D)	10.12 TPY OC, based upon a rolling, 12-month summation  See Sections A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f. and A.2.2.j.  The limit based on this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05 (BAT) above.
	OAC rule 3745-17-11(A)	See Section A.2.2.c.  See Section B.1.  See Part I, Term A.7.
	OAC rule 3745-17-07(A)	
	OAC rule 3745-21-07(G)	
	OAC rule 3745-15-07	

**2. Additional Terms and Conditions**

- 2.a The total allowable usage\* 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 limitation shall be based on a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall not exceed the HAPs usage limits specified in the following table:

<u>Month(s)</u>	<u>In Tons</u>	<u>Maximum Allowable Single HAP Usage</u>	<u>Maximum Allowable Combined HAP Usage</u>
1		0.8	2.1
1-2		1.7	4.2
1-3		2.5	6.2
1-4		3.3	8.3
1-5		4.2	10.4
1-6		5.0	12.5
1-7		5.8	14.6

**CJ Krehbiel Co**

PTI License # 14 04841

**Issue**

**Facility ID: 1431070992**

**Emissions Unit ID: R005**

1-8	6.6	16.6
1-9	7.5	18.7
1-10	8.3	20.8
1-11	9.1	22.9
1-12	9.9	24.9

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual HAPs usage limits shall be based upon a rolling, 12-month summation of the HAP(s) usage\* figures.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

**2.b** The maximum organic compound content of the coatings, fountain solutions, and cleanup materials, as applied, shall not exceed the following:

Ink		45% by weight OC
Fountain Solution	0.21 lb OC/gallon	
Blanket Wash	6.6	lbs OC/gallon

**2.c** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.

**2.d** The maximum annual ink usage for this emissions unit shall not exceed 170,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the ink usage levels specified in the following table:

<u>Month(s)</u>	<u>in pounds</u>	<u>Maximum Allowable Cumulative Ink Usage,</u>
1		14,167
1-2		28,334
1-3		42,501
1-4		56,668
1-5		70,835
1-6		85,002
1-7		99,169
1-8		113,336
1-9		127,503
1-10		141,670
1-11		155,837
1-12		170,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual ink usage limitation shall be based upon a rolling, 12-month summation of the ink usage figures.

**2.e** The maximum annual fountain solution usage for this emissions unit shall not exceed 100,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fountain solution usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>	<u>Maximum Allowable Cumulative Fountain Solution</u>
1		8,333
1-2		16,666
1-3		24,999
1-4		33,332
1-5		41,665
1-6		49,998
1-7		58,331
1-8		66,664

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PTI**

Emissions Unit ID: **R005**

**Issued: To be entered upon final issuance**

1-9	74,997
1-10	83,330
1-11	91,663
1-12	100,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual fountain solution usage limitation shall be based upon a rolling, 12-month summation of the fountain solution usage figures.

- 2.f** The maximum annual blanket wash material usage for this emissions unit shall not exceed 2,500 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the blanket wash material usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Blanket Wash Usage, in gallons</u>
1	400
1-2	570
1-3	740
1-4	910
1-5	1,080
1-6	1,248
1-7	1,456
1-8	1,664
1-9	1,872
1-10	2,080
1-11	2,288
1-12	2,500

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual blanket wash material usage rate limitation shall be based upon a rolling, 12-month summation of the blanket wash material usage figures.

- 2.g** The daily emission limitation outlined for coatings and fountain solutions are based upon the emissions units' PTE at 24 hours per day. Therefore, no daily records are required to demonstrate compliance with this limit.
- 2.h** Daily, monthly, and annual emissions rates in this permit are subject to revision should any of the listed emissions units be withdrawn.
- 2.i** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by OC content limitations for all coatings, fountain solutions and cleanup materials, usage limitations, use of the RTO and compliance with the Air Toxics Policy.
- 2.j** The permittee shall operate and maintain a control device capable of maintaining, at a minimum, a 92.5% (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the control device exhaust for emissions units R005, R007 and R011.

**B. Operational Restrictions**

1. The use of photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit R005.  
  
Prior to employing any photochemically reactive material in this emissions unit, including any cleanup material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.
2. The maximum daily cleanup material usage for emissions unit R005 shall not exceed 10 gallons per day.
3. To ensure that the evaporative OC/VOC loss from the hand cleanup process does not exceed more than 50% (by weight), all rags utilized in the cleanup process shall be stored in containers with tight covers.
4. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in

compliance.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information each month for the entire facility:
  - a. The name and identification number of all coatings and each fountain solution, employed;
  - b. The individual Hazardous Air Pollutant (HAP) content for each HAP of all coatings and each fountain solution in pounds of individual HAP per gallon of coating (or fountain solution), as applied;
  - c. The total combined HAP content of all coatings and each fountain solution in pounds of combined HAPs per gallon of coating (or fountain solution), as applied [sum all the individual HAP contents from (b)];
  - d. The number of gallons of all coatings and each fountain solution employed;
  - e. The name and identification of each cleanup material employed;
  - f. The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
  - g. The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
  - h. The number of gallons of each cleanup material employed;
  - i. The total individual HAP usage for each HAP from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating and fountain solution plus the sum of (f) times (h) for each cleanup material];
  - j. The total combined HAP usage\* from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating and fountain solution plus the sum of (g) times (h) for each cleanup material];
  - k. The updated rolling, 12-month summation of usage\* for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - l. The updated rolling, 12-month summation of usage\* for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

**CJ Krehbiel Co****PTI 14-01011****Issue****Facility ID: 1431070992****Emissions Unit ID: R005**

\*\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

\*\*\* Inks may be recorded in pounds HAP per pound ink and annual HAP emissions calculated using:

$E = \text{Lbs. ink employed per month} \times \text{HAP fraction of ink by wt.} = \text{Lbs. HAPs/Month}$

\*\*\*\* Fountain solutions, aqueous coatings, and cleanup material may be recorded in pounds HAP per gallon of material and annual HAP emissions calculated using:

$E = \text{Lbs. HAP per gallon material} \times \text{No. of gallons employed per month} = \text{Lbs. HAPs/Month}$

2. The permittee shall collect and record the following information each day for cleanup materials employed in this emissions unit:
  - a. The company identification (including product name per MSDSs) for each cleanup material employed.
  - b. Documentation on whether or not each cleanup material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of gallons of each cleanup material employed.
  - d. The organic compound content of each cleanup material, as applied.
3. The permittee shall collect and record the following information each month for each material employed in each emissions unit:
  - a. The company identification for each coating, fountain solution, and cleanup material employed.
  - b. A record of each coating and fountain solution employed in this emissions unit indicating whether or not the coating or fountain solution is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of pounds and gallons of each coating and fountain solution employed, respectively.
  - d. The organic compound content of each coating and fountain solution in pounds per pound, and pounds per gallon, respectively.
  - e. The organic compound emission rate for each coating, fountain solution, and cleanup material, in pounds or tons per month.
  - f. The total organic compound emission rate for all coatings, fountain solutions, and cleanup materials, in pounds or tons per month.
  - g. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative organic compound emissions for each calendar month.
  - h. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month total organic compound emissions rate for all coatings, fountain solutions, and cleanup materials, in tons per year.
  - i. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative usage figures for each material employed (See Sections A.2.2.d. through A.2.2.f.) for each calendar month.
  - j. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month summation of the coating, fountain solution and cleanup material usage figures, in gallons per year. (See Sections A.2.2.d. through A.2.2.f.)

Note: The coating information must be for the coatings as applied, including any thinning solvents or catalysts added at the emissions unit. Also, the definitions of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).
4. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and
  - b. A copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.
5. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in

**CJ Krehbiel Co**

PTI A-11-11-11 11 01011

**Issue****Facility ID: 1431070992****Emissions Unit ID: R005**

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.
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

**D. Reporting Requirements**

1. The permittee shall submit an annual report which identifies each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted by January 31 of each year and shall cover the previous calendar year.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in this Permit to Install. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R005. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly deviation (excursion) reports which identify:
  - a. Any exceedances of cleanup material usage or emissions limit in this permit (e.g., 10 gallons per day cleanup for emissions unit R005).
  - b. All exceedances of the OC content limits delineated in Section A.2.2.b.
  - c. All exceedances of the rolling, 12-month usage limitations for all materials employed and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative materials usage rates limits. (See Sections A.2.2.d. through A.2.2.f.)
  - d. All exceedances of the rolling, 12-month OC emission limitation.
5. 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 above. This report shall include the allowable operating temperature determined during the last emissions test.
6. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
105.09 lbs/day OC for emissions unit R005  
  
Applicable Compliance Method:  
Compliance for the inks and fountain solutions shall be based on multiplying the maximum daily usage rates (1920 pounds/day and 273.6 gallons/day, respectively) by the maximum OC contents (45% OC by weight and 0.21 lbs/gallon, respectively) and adding their results to the daily OC emissions from the cleanup materials (as determined by the record keeping requirements specified in Section C.2.).
  - b. Emission Limitation:  
0.551 lb/hr PM/PM10  
  
Applicable Compliance Method:  
If testing is required to demonstrate compliance with the allowable emission limitation of 0.551 pound PM/PM10 per hour, then testing shall be conducted using the following method: Method 5, 40 CFR Part 60, Appendix A.
  - c. Emission Limitation:  
2.41 TPY PM/PM10

**CJ Krehbiel Co**

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**Issue****Facility ID: 1431070992****Emissions Unit ID: R005****Applicable Compliance Method:**

The 2.41 TPY limitation was developed by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation:  
10.12 TPY OC

**Applicable Compliance Method:**

Compliance shall be based upon the record keeping requirements specified in Section C.3.

- e. Emission Limitation:  
10.12 TPY OC, based upon a rolling, 12-month summation

**Applicable Compliance Method:**

Compliance shall be based upon the record keeping requirements specified in Section C.3.

- f. Emission Limitation:  
HAPs emissions 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs

**Applicable Compliance Method:**

Compliance shall be based upon the record keeping requirements specified in Section C.1.

- g. Organic Compound Content Limitations:  
Ink: 45% by weight OC  
Fountain Solution: 0.21 lb OC/gallon  
Blanket Wash: 6.6 lbs OC/gallon

**Applicable Compliance Method:**

Formulation data or USEPA method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks and coatings.

- h. Compliance with the usage rate limitations for all materials employed (see Sections A.2.2.d. through A.2.2.f.) shall be based upon the record keeping requirements specified in Section C.3.
- i. Compliance with the daily cleanup material usage rate limitation specified in Section B.2. shall be based upon the record keeping requirements specified in Section C.2.

2. The OC emission rate for inks is calculated on a "worst case" basis for the ink with the highest OC content as follows:

$$E = \text{OC content of the ink (in pounds OC/pounds ink)} \times \text{pounds of ink employed per unit time} \times 1\text{-\%retention.}$$

3. The OC emission rate for fountain solutions and cleanup materials shall be based on OC content information from the manufacturer and is calculated as follows:

$$E = \text{OC content of the fountain solution or cleanup material (pounds per gallon)} \times \text{gallons employed per unit time} \times 1\text{-\%retention.}$$

4. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

5. The permittee shall conduct, or have conducted, emission testing for emissions unit R005 in accordance with the following requirements:

- a. The emission testing shall be conducted within six months after issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation for R005.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable control efficiency: Method 25 of 40 CFR Part 60, if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

**CJ Krehbiel Co****PTI 14-1534****Issue****Facility ID: 1431070992****Emissions Unit ID: R005**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

#### **F. Miscellaneous Requirements**

1. The terms and conditions of this permit to install shall supersede all the Air Pollution Control requirements contained in permit to install 14-1534, issued for emissions unit R005.
2. This permit allows the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: Glycol Ethers  
 TLV (ug/m3): 121,000  
 Maximum Hourly Emission Rate (lbs/hr): 73.92  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,775  
 MAGLC (ug/m3): 2,880

Pollutant: Ethylene Glycol  
 TLV (ug/m3): 100,000  
 Maximum Hourly Emission Rate (lbs/hr): 9.39  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 351.8  
 MAGLC (ug/m3): 2,381

Pollutant: Naphthalene  
 TLV (ug/m3): 52,400  
 Maximum Hourly Emission Rate (lbs/hr): 26.02  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 977.8  
 MAGLC (ug/m3): 1,247

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- 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 specified in the above table;
- b. Changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. Changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and

**CJ Krehbiel Co****PTI Application 14-01841****Issue****Facility ID: 1431070992****Emissions Unit ID: R005**

- d. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

3. The following terms and conditions of this permit are federally enforceable, pursuant to OAC rule 3745-31-05(D): A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f., A.2.2.j., B.1., B.4., C.1., C.2., C.3., C.5., D.1., D.2., D.3., D.4., D.5., E.5. and F.1.
4. For all inks employed, the worst case OC content can be used to calculate emissions.

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**PTI**

Emissions Unit ID: **R007**

**Issued: To be entered upon final issuance**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Heatset web offset press with dryer and regenerative thermal oxidizer (RTO) - Hantscho IV (modification)	OAC rule 3745-31-05 (A)(3)	96.35 lbs/day OC for R007 0.551 lb/hr PM/PM10 2.41 TPY PM/PM10
	OAC rule 3745-31-05(D)	5.87 TPY OC 5.87 TPY OC, based upon a rolling, 12-month summation. See Sections A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f. and A.2.2.j. The limit based on this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05 (BAT) above.
	OAC rule 3745-17-11(A)	See Section A.2.2.c. See Section B.1. See Part I, Term A.7.
	OAC rule 3745-17-07(A)	
	OAC rule 3745-21-07(G)	
	OAC rule 3745-15-07	

**2. Additional Terms and Conditions**

- 2.a The total allowable usage\* 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 limitation shall be based on a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall not exceed the HAPs usage limits specified in the following table:

<u>Month(s)</u>	<u>In Tons</u>	<u>Maximum Allowable Single HAP Usage</u>	<u>Maximum Allowable Combined HAP Usage</u>
1		0.8	2.1
1-2		1.7	4.2
1-3		2.5	6.2
1-4		3.3	8.3
1-5		4.2	10.4
1-6		5.0	12.5
1-7		5.8	14.6
1-8		6.6	16.6

**CJ Krehbiel Co**

PTI 14-01041

**Issue****Facility ID: 1431070992****Emissions Unit ID: R007**

1-9	7.5	18.7
1-10	8.3	20.8
1-11	9.1	22.9
1-12	9.9	24.9

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual HAPs usage limits shall be based upon a rolling, 12-month summation of the HAP(s) usage\* figures.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

- 2.b** The maximum organic compound content of the coatings, fountain solutions, and cleanup materials, as applied, shall not exceed the following:

Ink	45% by weight OC
Fountain Solution	0.16 lb OC/gallon
Blanket Wash	6.6 lbs OC/gallon

- 2.c** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.

- 2.d** The maximum annual ink usage for this emissions unit shall not exceed 80,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the ink usage levels specified in the following table:

<u>Month(s)</u>	<u>in pounds</u>	<u>Maximum Allowable</u> <u>Cumulative Ink Usage.</u>
1	6,667	
1-2	13,334	
1-3	20,001	
1-4	26,668	
1-5	33,335	
1-6	40,002	
1-7	46,669	
1-8	53,336	
1-9	60,003	
1-10	66,670	
1-11	73,337	
1-12	80,000	

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual ink usage limitation shall be based upon a rolling, 12-month summation of the ink usage figures.

- 2.e** The maximum annual fountain solution usage for this emissions unit shall not exceed 53,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fountain solution usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>	<u>Maximum Allowable</u> <u>Cumulative Fountain Solution</u>
1	4,417	
1-2	8,834	
1-3	13,251	
1-4	17,668	
1-5	22,085	
1-6	26,502	
1-7	30,919	
1-8	35,336	
1-9	39,753	

**CJ K  
PTI**

Emissions Unit ID: **R007**

**Issued: To be entered upon final issuance**

1-10	44,170
1-11	48,587
1-12	53,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual fountain solution usage limitation shall be based upon a rolling, 12-month summation of the fountain solution usage figures.

**2.f** The maximum annual blanket wash material usage for this emissions unit shall not exceed 2,000 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the blanket wash material usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Blanket Wash Usage, in gallons</u>
1	330
1-2	460
1-3	590
1-4	720
1-5	850
1-6	1,002
1-7	1,169
1-8	1,336
1-9	1,503
1-10	1,670
1-11	1,837
1-12	2,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual blanket wash material usage limitation shall be based upon a rolling, 12-month summation of the blanket wash material usage figures.

**2.g** The daily emission limitation outlined for coatings and fountain solutions are based upon the emissions units' PTE at 24 hours per day. Therefore, no daily records are required to demonstrate compliance with this limit.

**2.h** Daily, monthly, and annual emissions rates in this permit are subject to revision should any of the listed emissions units be withdrawn.

CJ Krehbiel Co

PTI 14 04 11

Issue

Facility ID: 1431070992

Emissions Unit ID: R007

- 2.i Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by OC content limitations for all coatings, fountain solutions and cleanup materials, usage limitations, use of the RTO and compliance with the Air Toxics Policy.
- 2.j The permittee shall operate and maintain a control device capable of maintaining, at a minimum, a 92.5% (by weight of organic compounds) control efficiency at maximum hourly coating capacity from the control device exhaust for emissions units R005, R007 and R011.

**B. Operational Restrictions**

1. The use of photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit R007.  
Prior to employing any photochemically reactive material in this emissions unit, including any cleanup material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.
2. The maximum daily cleanup material usage for emissions unit R007 shall not exceed 10 gallons per day.
3. To ensure that the evaporative OC/VOC loss from the hand cleanup process does not exceed more than 50% (by weight), all rags utilized in the cleanup process shall be stored in containers with tight covers.
4. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information each month for the entire facility:
  - a. The name and identification number of all coatings and each fountain solution, employed;
  - b. The individual Hazardous Air Pollutant (HAP) content for each HAP of all coatings and each fountain solution in pounds of individual HAP per gallon of coating (or fountain solution), as applied;
  - c. The total combined HAP content of all coatings and each fountain solution in pounds of combined HAPs per gallon of coating (or fountain solution), as applied [sum all the individual HAP contents from (b)];
  - d. The number of gallons of all coatings and each fountain solution employed;
  - e. The name and identification of each cleanup material employed;
  - f. The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
  - g. The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
  - h. The number of gallons of each cleanup material employed;
  - i. The total individual HAP usage for each HAP from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating and fountain solution plus the sum of (f) times (h) for each cleanup material];
  - j. The total combined HAP usage\* from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating and fountain solution plus the sum of (g) times (h) for each cleanup material];
  - k. The updated rolling, 12-month summation of usage\* for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - l. The updated rolling, 12-month summation of usage\* for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

CJ Krehbiel Co

PTI / 11 0 10 11

Issue

Facility ID: 1431070992

Emissions Unit ID: R007

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

\*\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

\*\*\* Inks may be recorded in pounds HAP per pound ink and annual HAP emissions calculated using:

$E = \text{Lbs. ink employed per month} \times \text{HAP fraction of ink by wt.} = \text{Lbs. HAPs/Month}$

\*\*\*\* Fountain solutions, aqueous coatings, and cleanup material may be recorded in pounds HAP per gallon of material and annual HAP emissions calculated using:

$E = \text{Lbs. HAP per gallon material} \times \text{No. of gallons employed per month} = \text{Lbs. HAPs/Month}$

2. The permittee shall collect and record the following information each day for cleanup materials employed in this emissions unit:
  - a. The company identification (including product name per MSDSs) for each cleanup material employed.
  - b. Documentation on whether or not each cleanup material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of gallons of each cleanup material employed.
  - d. The organic compound content of each cleanup material, as applied.
3. The permittee shall collect and record the following information each month for each material employed in each emissions unit:
  - a. The company identification for each coating, fountain solution, and cleanup material employed.
  - b. A record of each coating and fountain solution employed in this emissions unit indicating whether or not the coating or fountain solution is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of pounds and gallons of each coating and fountain solution employed, respectively.
  - d. The organic compound content of each coating and fountain solution in pounds per pound, and pounds per gallon, respectively.
  - e. The organic compound emission rate for each coating, fountain solution, and cleanup material, in pounds or tons per month.
  - f. The total organic compound emission rate for all coatings, fountain solutions, and cleanup materials, in pounds or tons per month.
  - g. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative organic compound emissions for each calendar month.
  - h. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month total organic compound emissions rate for all coatings, fountain solutions, and cleanup materials, in tons per year.
  - i. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative usage figures for each material employed (See Sections A.2.2.d. through A.2.2.f.) for each calendar month.
  - j. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month summation of the coating, fountain solution and cleanup material usage figures, in gallons per year. (See Sections A.2.2.d. through A.2.2.f.)

Note: The coating information must be for the coatings as applied, including any thinning solvents or catalysts added at the emissions unit. Also, the definitions of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).
4. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and
  - b. A copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

**CJ Krehbiel Co****PTI****Issue****Facility ID: 1431070992****Emissions Unit ID: R007**

5. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information 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.
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

**CJ K  
PTI**

Emissions Unit ID: **R007**

**Issued: To be entered upon final issuance**

**D. Reporting Requirements**

1. The permittee shall submit an annual report which identifies each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted by January 31 of each year and shall cover the previous calendar year.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in this Permit to Install. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R007. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly deviation (excursion) reports which identify:
  - a. Any exceedances of cleanup material usage or emissions limit in this permit (e.g., 10 gallons per day cleanup for emissions unit R007).
  - b. All exceedances of the OC content limits delineated in Section A.2.2.b.
  - c. All exceedances of the rolling, 12-month usage limitations for all materials employed and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative materials usage rates limits. (See Sections A.2.2.d. through A.2.2.f.)
  - d. All exceedances of the rolling, 12-month OC emission limitation.
5. 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 above. This report shall include the allowable operating temperature determined during the last emissions test.
6. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
96.35 lbs/day OC for emissions unit R007  
  
Applicable Compliance Method:  
Compliance for the inks and fountain solutions shall be based on multiplying the maximum daily usage rates (1920 pounds/day and 204 gallons/day, respectively) by the maximum OC contents (45% OC by weight and 0.16 lbs/gallon, respectively) and adding their results to the daily OC emissions from the cleanup materials (as determined by the record keeping requirements specified in Section C.2.).
  - b. Emission Limitation:  
0.551 lb/hr PM/PM10  
  
Applicable Compliance Method:  
If testing is required to demonstrate compliance with the allowable emission limitation of 0.551 pound PM/PM10 per hour, then testing shall be conducted using the following method: Method 5, 40 CFR Part 60, Appendix A.
  - c. Emission Limitation:  
2.41 TPY PM/PM10  
  
Applicable Compliance Method:  
The 2.41 TPY limitation was developed by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.
  - d. Emission Limitation:  
5.87 TPY OC  
  
Applicable Compliance Method:

**CJ Krehbiel Co**

PTI 11 0 10 11

**Issue****Facility ID: 1431070992****Emissions Unit ID: R007**

Compliance shall be based upon the record keeping requirements specified in Section C.3.

## e. Emission Limitation:

5.87 TPY OC, based upon a rolling, 12-month summation

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.3.

## f. Emission Limitation:

HAPs emissions 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.1.

## g. Organic Compound Content Limitations:

Ink: 45% by weight OC

Fountain Solution: 0.16 lb OC/gallon

Blanket Wash: 6.6 lbs OC/gallon

## Applicable Compliance Method:

Formulation data or USEPA method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks and coatings.

## h. Compliance with the usage rate limitations for all materials employed (see Sections A.2.2.d. through A.2.2.f.) shall be based upon the record keeping requirements specified in Section C.3.

## i. Compliance with the daily cleanup usage rate limitation specified in Section B.2. shall be based upon the record keeping requirements specified in Section C.2.

## 2. The OC emission rate for inks is calculated on a "worst case" basis for the ink with the highest OC content as follows:

$$E = \text{OC content of the ink (in pounds OC/pounds ink)} \times \text{pounds of ink employed per unit time} \times 1\text{-\%retention.}$$

## 3. The OC emission rate for fountain solutions and cleanup materials shall be based on OC content information from the manufacturer and is calculated as follows:

$$E = \text{OC content of the fountain solution or cleanup material (pounds per gallon)} \times \text{gallons employed per unit time} \times 1\text{-\%retention.}$$

## 4. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

## 5. The permittee shall conduct, or have conducted, emission testing for emissions unit R007 in accordance with the following requirements:

a. The emission testing shall be conducted within six months after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation for R007.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable control efficiency: Method 25 of 40 CFR Part 60, if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

**CJ Krehbiel Co****PTI 14-01811****Issue****Facility ID: 1431070992****Emissions Unit ID: R007**

characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

**F. Miscellaneous Requirements**

1. The terms and conditions of this permit to install shall supersede all the Air Pollution Control requirements contained in permit to install 14-2135, issued for emissions unit R007.
2. This permit allows the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: Glycol Ethers  
 TLV (ug/m3): 121,000  
 Maximum Hourly Emission Rate (lbs/hr): 73.92  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,775  
 MAGLC (ug/m3): 2,880

Pollutant: Ethylene Glycol  
 TLV (ug/m3): 100,000  
 Maximum Hourly Emission Rate (lbs/hr): 9.39  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 351.8  
 MAGLC (ug/m3): 2,381

Pollutant: Naphthalene  
 TLV (ug/m3): 52,400  
 Maximum Hourly Emission Rate (lbs/hr): 26.02  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 977.8  
 MAGLC (ug/m3): 1,247

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- 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 specified in the above table;
- b. Changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. Changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and
- d. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

**CJ Krehbiel Co****PTI Application 14-04841****Issue****Facility ID: 1431070992****Emissions Unit ID: R007**

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

3. The following terms and conditions of this permit are federally enforceable, pursuant to OAC rule 3745-31-05(D): A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f., A.2.2.j., B.1., B.4., C.1., C.2., C.3., C.5., D.1., D.2., D.3., D.4., D.5., E.5. and F.1.
4. For all inks employed, the worst case OC content can be used to calculate emissions.

**CJ K  
PTI**

Emissions Unit ID: **R010**

**Issued: To be entered upon final issuance**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Non-heatset sheet-fed offset press with infrared dryer - Mitsubishi Sheet Fed	OAC rule 3745-31-05 (A)(3)	330.82 lbs/day OC for R010
	OAC rule 3745-31-05(D)	10.60 TPY OC
		10.60 TPY OC, based upon a rolling, 12-month summation.
		See Sections A.2.2.a., A.2.2.b., A.2.2.c., A.2.2.d., A.2.2.e. and A.2.2.f.
		See Section B.1.
		See Part I, Term A.7.
	OAC rule 3745-21-07(G)	
	OAC rule 3745-15-07	

**2. Additional Terms and Conditions**

- 2.a The total allowable usage\* 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 limitation shall be based on a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall not exceed the HAPs usage limits specified in the following table:

**CJ K  
PTI**

Emissions Unit ID: **R010**

**Issued: To be entered upon final issuance**

<u>Month(s)</u>	<u>In Tons</u>	Maximum Allowable Single HAP Usage	Maximum Allowable Combined HAP Usage <u>In Tons</u>
1		0.8	2.1
1-2		1.7	4.2
1-3		2.5	6.2
1-4		3.3	8.3
1-5		4.2	10.4
1-6		5.0	12.5
1-7		5.8	14.6
1-8		6.6	16.6
1-9		7.5	18.7
1-10		8.3	20.8
1-11		9.1	22.9
1-12		9.9	24.9

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual HAPs usage limits shall be based upon a rolling, 12-month summation of the HAP(s) usage\* figures.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

- 2.b** The maximum organic compound content of the coatings, fountain solutions, and cleanup materials, as applied, shall not exceed the following:

Ink		30% by weight OC
Fountain Solution	0.16 lb OC/gallon	
Aqueous Coating	1.35 lbs OC/gallon	
Blanket Wash	6.6	lbs OC/gallon

- 2.c** The maximum annual ink usage for this emissions unit shall not exceed 40,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the ink usage levels specified in the following table:

<u>Month(s)</u>	<u>in pounds</u>	<u>Maximum Allowable Cumulative Ink Usage.</u>
1		3,333
1-2		6,666
1-3		9,999
1-4		13,332
1-5		16,665
1-6		19,998
1-7		23,331
1-8		26,664
1-9		29,997
1-10		33,330
1-11		36,663
1-12		40,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual ink usage limitation shall be based upon a rolling, 12-month summation of the ink usage figures.

- 2.d** The maximum annual fountain solution usage for this emissions unit shall not exceed 20,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fountain solution usage levels specified in the following table:

Maximum Allowable

**CJ Krehbiel Co**  
**PTI**  
**Issue**

**Facility ID: 1431070992**

**Emissions Unit ID: R010**

<u>Month(s)</u>	<u>Cumulative Fountain Solution Usage, in gallons</u>
1	1,667
1-2	3,334
1-3	5,001
1-4	6,668
1-5	8,335
1-6	10,002
1-7	11,669
1-8	13,336
1-9	15,003
1-10	16,670
1-11	18,337
1-12	20,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual fountain solution usage limitation shall be based upon a rolling, 12-month summation of the fountain solution usage figures.

**CJ K**  
**PTI**

Emissions Unit ID: **R010**

**Issued: To be entered upon final issuance**

- 2.e** The maximum annual aqueous coating usage for this emissions unit shall not exceed 8,000 gallons per year, based upon a rolling, 12-month summation of the aqueous coating usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aqueous coating usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>	<u>Maximum Allowable Cumulative Aqueous Coating</u>
1	667	
1-2	1,334	
1-3	2,001	
1-4	2,668	
1-5	3,335	
1-6	4,002	
1-7	4,669	
1-8	5,336	
1-9	6,003	
1-10	6,670	
1-11	7,337	
1-12	8,000	

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aqueous coating usage limitation shall be based upon a rolling, 12-month summation of the aqueous coating usage figures.

- 2.f** The maximum annual blanket wash material usage for this emissions unit shall not exceed 1,000 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the blanket wash material usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>	<u>Maximum Allowable Cumulative Blanket Wash</u>
1	160	
1-2	230	
1-3	300	
1-4	370	
1-5	440	
1-6	498	
1-7	581	
1-8	664	
1-9	747	
1-10	830	
1-11	913	
1-12	1,000	

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual blanket wash material usage limitation shall be based upon a rolling, 12-month summation of the blanket wash material usage figures.

- 2.g** The daily emission limitation outlined for coatings, fountain solutions, and aqueous coatings are based upon the emissions units' PTE at 24 hours per day. Therefore, no daily records are required to demonstrate compliance with this limit.
- 2.h** Daily, monthly, and annual emissions rates in this permit are subject to revision should any of the listed emissions units be withdrawn.
- 2.i** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by OC content limitations for all coatings, fountain solutions and cleanup materials, usage limitations and compliance with the Air Toxics Policy.

**B. Operational Restrictions**

1. The use of photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit R010.

**CJ Krehbiel Co****PTI****Issue****Facility ID: 1431070992****Emissions Unit ID: R010**

Prior to employing any photochemically reactive material in this emissions unit, including any cleanup material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.

2. The maximum daily cleanup material usage for emissions unit R010 shall not exceed 10 gallons per day.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information each month for the entire facility:
  - a. The name and identification number of all coatings and each fountain solution, employed;
  - b. The individual Hazardous Air Pollutant (HAP) content for each HAP of all coatings and each fountain solution in pounds of individual HAP per gallon of coating (or fountain solution), as applied;
  - c. The total combined HAP content of all coatings and each fountain solution in pounds of combined HAPs per gallon of coating (or fountain solution), as applied [sum all the individual HAP contents from (b)];
  - d. The number of gallons of all coatings and each fountain solution employed;
  - e. The name and identification of each cleanup material employed;
  - f. The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
  - g. The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
  - h. The number of gallons of each cleanup material employed;
  - i. The total individual HAP usage for each HAP from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating and fountain solution plus the sum of (f) times (h) for each cleanup material];
  - j. The total combined HAP usage\* from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating and fountain solution plus the sum of (g) times (h) for each cleanup material];
  - k. The updated rolling, 12-month summation of usage\* for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - l. The updated rolling, 12-month summation of usage\* for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

\*\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

\*\*\* Inks may be recorded in pounds HAP per pound ink and annual HAP emissions calculated using:

$$E = \text{Lbs. ink employed per month} \times \text{HAP fraction of ink by wt.} = \text{Lbs. HAPs/Month}$$

\*\*\*\* Fountain solutions, aqueous coatings, and cleanup material may be recorded in pounds HAP per gallon of material and annual HAP emissions calculated using:

$$E = \text{Lbs. HAP per gallon material} \times \text{No. of gallons employed per month} = \text{Lbs. HAPs/Month}$$

2. The permittee shall collect and record the following information each day for cleanup materials employed in this emissions unit:

**CJ Krehbiel Co****PTI 14-04841****Issue****Facility ID: 1431070992****Emissions Unit ID: R010**

- a. The company identification (including product name per MSDSs) for each cleanup material employed.
  - b. Documentation on whether or not each cleanup material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of gallons of each cleanup material employed.
  - d. The organic compound content of each cleanup material, as applied.
3. The permittee shall collect and record the following information each month for each material employed in each emissions unit:
- a. The company identification for each coating (inks and aqueous coatings), fountain solution, and cleanup material employed.
  - b. A record of each coating and fountain solution employed in this emissions unit indicating whether or not the coating or fountain solution is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of pounds and gallons of each coating and fountain solution employed, respectively.
  - d. The organic compound content of each coating and fountain solution in pounds per pound, and pounds per gallon, respectively.
  - e. The organic compound emission rate for each coating, fountain solution, and cleanup material, in pounds or tons per month.
  - f. The total organic compound emission rate for all coatings, fountain solutions, and cleanup materials, in pounds or tons per month.
  - g. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative organic compound emissions for each calendar month.
  - h. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month total organic compound emissions rate for all coatings, fountain solutions, and cleanup materials, in tons per year.
  - i. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative usage figures for each material employed (See Sections A.2.2.c. through A.2.2.f.) for each calendar month.
  - j. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month summation of the coating, fountain solution and cleanup material usage figures, in gallons per year. (See Sections A.2.2.c. through A.2.2.f.)

Note: The coating information must be for the coatings as applied, including any thinning solvents or catalysts added at the emissions unit. Also, the definitions of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).

4. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and
  - b. A copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit an annual report which identifies each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted by January 31 of each year and shall cover the previous calendar year.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in this Permit to Install. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
3. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R010. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly deviation (excursion) reports which identify:
  - a. Any exceedances of cleanup material usage or emissions limit in this permit (e.g., 10 gallons per day cleanup for emissions unit R010).

**CJ Krehbiel Co****PTI License # 14 04841****Issue****Facility ID: 1431070992****Emissions Unit ID: R010**

- b. All exceedances of the OC content limits delineated in Section A.2.2.b.
  - c. All exceedances of the rolling, 12-month usage limitations for all materials employed and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative materials usage rates limits. (See Sections A.2.2.c. through A.2.2.f.)
  - d. All exceedances of the rolling, 12-month OC emission limitation.
5. 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. Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):
- a. Emission Limitation:  
330.82 lbs/day OC for emissions unit R010  
  
Applicable Compliance Method:  
Compliance for the inks, fountain solutions and aqueous coatings shall be based on multiplying the maximum daily usage rates (1920 pounds/day, 57.6 gallons/day, and 168 gallons/day respectively) by the maximum OC contents (30% OC by weight, 0.16 lb/gallon and 1.35 lbs/gallon, respectively) and adding their results to the daily OC emissions from the cleanup materials (as determined by the record keeping requirements specified in Section C.2.).
  - b. Emission Limitation:  
10.60 TPY OC  
  
Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
  - c. Emission Limitation:  
10.60 TPY OC, based upon a rolling, 12-month summation  
  
Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
  - d. Emission Limitation:  
HAPs emissions 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs  
  
Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1.
  - e. Organic Compound Content Limitations:  
Ink: 30% by weight OC  
Fountain Solution: 0.16 lb OC/gallon  
Aqueous Coating: 1.35 lbs OC/gallon  
Blanket Wash: 6.6 lbs OC/gallon  
  
Applicable Compliance Method:  
Formulation data or USEPA method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks and coatings.
  - f. Compliance with the usage rate limitations for all materials employed (see Sections A.2.2.c. through A.2.2.f.) shall be based upon the record keeping requirements specified in Section C.3.
  - g. Compliance with the daily cleanup material usage rate limitation specified in Section B.2. shall be based upon the record keeping requirements specified in Section C.2.
2. The OC emission rate for inks is calculated on a "worst case" basis for the ink with the highest OC content as follows:  
  
 $E = \text{OC content of the ink (in pounds OC/pounds ink)} \times \text{pounds of ink employed per unit time} \times 1\text{-\%retention.}$
3. The OC emission rate for fountain solutions, aqueous coatings and cleanup materials shall be based on OC content information from the manufacturer and is calculated as follows:

CJ Krehbiel Co

PTI / 11 0 10 11

Issue

Facility ID: 1431070992

Emissions Unit ID: R010

$E = \text{OC content of the fountain solution, aqueous coating or cleanup material (pounds per gallon)} \times \text{gallons employed per unit time} \times 1\text{-}\% \text{retention.}$

#### F. Miscellaneous Requirements

1. This permit allows the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: Glycol Ethers  
 TLV (ug/m3): 121,000  
 Maximum Hourly Emission Rate (lbs/hr): 15.26  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,004  
 MAGLC (ug/m3): 2,880

Pollutant: Ethylene Glycol  
 TLV (ug/m3): 100,000  
 Maximum Hourly Emission Rate (lbs/hr): 15.26  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,004  
 MAGLC (ug/m3): 1,754

Pollutant: Naphthalene  
 TLV (ug/m3): 52,400  
 Maximum Hourly Emission Rate (lbs/hr): 15.26  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,004  
 MAGLC (ug/m3): 1,247

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- 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 specified in the above table;
- b. Changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. Changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and
- d. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The following terms and conditions of this permit are federally enforceable, pursuant to OAC rule 3745-31-05(D): A.2.2.a., A.2.2.b., A.2.2.c., A.2.2.d., A.2.2.e., A.2.2.f., B.1., C.1., C.2., C.3., D.1., D.2., D.3. and D.4.
3. For all inks employed, the worst case OC content can be used to calculate emissions.

**CJ Krehbiel Co**  
**PTI**  
**Issue**

**Facility ID: 1431070992**

**Emissions Unit ID: R010**

**CJ K**  
**PTI**

Emissions Unit ID: **R011**

**Issued: To be entered upon final issuance**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Heatset web offset press with dryer and regenerative thermal oxidizer (RTO) - Mitsubishi Web	OAC rule 3745-31-05 (A)(3)	360.34 lbs/day OC for R011 0.551 lb/hr PM/PM10 2.41 TPY PM/PM10
	OAC rule 3745-31-05(D)	32.60 TPY OC 32.60 TPY OC, based upon a rolling, 12-month summation. See Sections A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f. and A.2.2.j.
	OAC rule 3745-17-11(A)	The limit based on this rule is less stringent than the limit established pursuant to OAC rule 3745-31-05 (BAT) above. See Section A.2.2.c. See Section B.1. See Part I, Term A.7.
	OAC rule 3745-17-07(A)	
	OAC rule 3745-21-07(G)	
	OAC rule 3745-15-07	

**CJ K  
PTI**

Emissions Unit ID: **R011**

**Issued: To be entered upon final issuance**

**2. Additional Terms and Conditions**

- 2.a** The total allowable usage\* 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 limitation shall be based on a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall not exceed the HAPs usage limits specified in the following table:

<u>Month(s)</u>	<u>In Tons</u>	<u>Maximum Allowable Single HAP Usage</u>	<u>Maximum Allowable Combined HAP Usage In Tons</u>
1		0.8	2.1
1-2		1.7	4.2
1-3		2.5	6.2
1-4		3.3	8.3
1-5		4.2	10.4
1-6		5.0	12.5
1-7		5.8	14.6
1-8		6.6	16.6
1-9		7.5	18.7
1-10		8.3	20.8
1-11		9.1	22.9
1-12		9.9	24.9

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual HAPs usage limits shall be based upon a rolling, 12-month summation of the HAP(s) usage\* figures.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

- 2.b** The maximum organic compound content of the coatings, fountain solutions, and cleanup materials, as applied, shall not exceed the following:

Ink		45% by weight OC
Fountain Solution	0.65 lb OC/gallon	
Blanket Wash	6.6	lbs OC/gallon

- 2.c** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average.

- 2.d** The maximum annual ink usage for this emissions unit shall not exceed 400,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the ink usage levels specified in the following table:

<u>Month(s)</u>	<u>in pounds</u>	<u>Maximum Allowable Cumulative Ink Usage.</u>
1		33,333
1-2		66,666
1-3		99,999
1-4		133,332
1-5		166,665
1-6		199,998
1-7		233,331
1-8		266,664
1-9		299,997
1-10		333,330
1-11		366,663
1-12		400,000

**Emissions Unit ID: R011**

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual ink usage limitation shall be based upon a rolling, 12-month summation of the ink usage figures.

- 2.e The maximum annual fountain solution usage for this emissions unit shall not exceed 120,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fountain solution usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>
1	10,000
1-2	20,000
1-3	30,000
1-4	40,000
1-5	50,000
1-6	60,000
1-7	70,000
1-8	80,000
1-9	90,000
1-10	100,000
1-11	110,000
1-12	120,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual fountain solution usage limitation shall be based upon a rolling, 12-month summation of the fountain solution usage figures.

- 2.f The maximum annual blanket wash material usage for this emissions unit shall not exceed 3,000 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the blanket wash material usage levels specified in the following table:

<u>Month(s)</u>	<u>Usage, in gallons</u>
1	500
1-2	700
1-3	900
1-4	1,100
1-5	1,300
1-6	1,500
1-7	1,750
1-8	2,000
1-9	2,250
1-10	2,500
1-11	2,750
1-12	3,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual blanket wash material usage limitation, shall be based upon a rolling, 12-month summation of the blanket wash material usage figures.

- 2.g The daily emission limitation outlined for coatings and fountain solutions are based upon the emissions units' PTE at 24 hours per day. Therefore, no daily records are required to demonstrate compliance with this limit.
- 2.h Daily, monthly, and annual emissions rates in this permit are subject to revision should any of the listed emissions units be withdrawn.
- 2.i Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by OC content limitations for all coatings, fountain solutions and cleanup materials, usage limitations, use of the RTO and compliance with the Air Toxics Policy.
- 2.j The permittee shall operate and maintain a control device capable of maintaining, at a minimum, a 92.5% (by weight of organic

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compounds) control efficiency at maximum hourly coating capacity from the control device exhaust for emissions units R005, R007 and R011.

**B. Operational Restrictions**

1. The use of photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit R011.  
  
Prior to employing any photochemically reactive material in this emissions unit, including any cleanup material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.
2. The maximum daily cleanup material usage for emissions unit R011 shall not exceed 20 gallons per day.
3. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall collect and record the following information each month for the entire facility:
  - a. The name and identification number of all coatings and each fountain solution, employed;
  - b. The individual Hazardous Air Pollutant (HAP) content for each HAP of all coatings and each fountain solution in pounds of individual HAP per gallon of coating (or fountain solution), as applied;
  - c. The total combined HAP content of all coatings and each fountain solution in pounds of combined HAPs per gallon of coating (or fountain solution), as applied [sum all the individual HAP contents from (b)];
  - d. The number of gallons of all coatings and each fountain solution employed;
  - e. The name and identification of each cleanup material employed;
  - f. The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
  - g. The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
  - h. The number of gallons of each cleanup material employed;
  - i. The total individual HAP usage for each HAP from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating and fountain solution plus the sum of (f) times (h) for each cleanup material];
  - j. The total combined HAP usage\* from all coatings, fountain solutions and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating and fountain solution plus the sum of (g) times (h) for each cleanup material];
  - k. The updated rolling, 12-month summation of usage\* for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI; and
  - l. The updated rolling, 12-month summation of usage\* for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

\* The usage figures for HAPs can be adjusted for retention and control efficiency where appropriate.

\*\* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

**CJ Krehbiel Co****PTI 14-01011****Issue****Facility ID: 1431070992****Emissions Unit ID: R011**

\*\*\* Inks may be recorded in pounds HAP per pound ink and annual HAP emissions calculated using:

$$E = \text{Lbs. ink employed per month} \times \text{HAP fraction of ink by wt.} = \text{Lbs. HAPs/Month}$$

\*\*\*\* Fountain solutions, aqueous coatings, and cleanup material may be recorded in pounds HAP per gallon of material and annual HAP emissions calculated using:

$$E = \text{Lbs. HAP per gallon material} \times \text{No. of gallons employed per month} = \text{Lbs. HAPs/Month}$$

2. The permittee shall collect and record the following information each day for cleanup materials employed in this emissions unit:
  - a. The company identification (including product name per MSDSs) for each cleanup material employed.
  - b. Documentation on whether or not each cleanup material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of gallons of each cleanup material employed.
  - d. The organic compound content of each cleanup material, as applied.
  
3. The permittee shall collect and record the following information each month for each material employed in each emissions unit:
  - a. The company identification for each coating, fountain solution, and cleanup material employed.
  - b. A record of each coating and fountain solution employed in this emissions unit indicating whether or not the coating or fountain solution is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
  - c. The number of pounds and gallons of each coating and fountain solution employed, respectively.
  - d. The organic compound content of each coating and fountain solution in pounds per pound, and pounds per gallon, respectively.
  - e. The organic compound emission rate for each coating, fountain solution, and cleanup material, in pounds or tons per month.
  - f. The total organic compound emission rate for all coatings, fountain solutions, and cleanup materials, in pounds or tons per month.
  - g. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative organic compound emissions for each calendar month.
  - h. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month total organic compound emissions rate for all coatings, fountain solutions, and cleanup materials, in tons per year.

**CJ Krehbiel Co**

PTI 11 0 10 11

**Issue****Facility ID: 1431070992****Emissions Unit ID: R011**

- i. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative usage figures for each material employed (See Sections A.2.2.d. through A.2.2.f.) for each calendar month.
- j. After the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the rolling 12-month summation of the coating, fountain solution and cleanup material usage figures, in gallons per year. (See Sections A.2.2.d. through A.2.2.f.)

Note: The coating information must be for the coatings as applied, including any thinning solvents or catalysts added at the emissions unit. Also, the definitions of "photochemically reactive" and "non-photochemically reactive" are based upon OAC rule 3745-21-01(C)(5).

- 4. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and
  - b. A copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.
- 5. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
 

The permittee shall collect and record the following information 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.
  - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

**D. Reporting Requirements**

- 1. The permittee shall submit an annual report which identifies each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted by January 31 of each year and shall cover the previous calendar year.
- 2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in this Permit to Install. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
- 3. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R011. These reports shall be submitted by January 31 of each year.
- 4. The permittee shall submit quarterly deviation (excursion) reports which identify:
  - a. Any exceedances of cleanup material usage or emissions limit in this permit (e.g., 20 gallons per day cleanup for emissions unit R011).
  - b. All exceedances of the OC content limits delineated in Section A.2.2.b.
  - c. All exceedances of the rolling, 12-month usage limitations for all materials employed and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative materials usage rates limits. (See Sections A.2.2.d. through A.2.2.f.)
  - d. All exceedances of the rolling, 12-month OC emission limitation.
- 5. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above. This report shall include the allowable operating temperature determined during the last emissions test.
- 6. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**E. Testing Requirements**

**CJ Krehbiel Co**  
**PTI**  
**Issue**

**Facility ID: 1431070992**

**Emissions Unit ID: R011**

1. Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
360.34 lbs/day OC for emissions unit R011  
  
Applicable Compliance Method:  
Compliance for the inks and fountain solutions shall be based on multiplying the maximum daily usage rates (4,800 pounds/day and 422.4 gallons/day, respectively) by the maximum OC contents (45% OC by weight and 0.65 lb/gallon, respectively) and adding their results

**CJ K**  
**PTI**

Emissions Unit ID: **R011**

**Issued: To be entered upon final issuance**

to the daily OC emissions from the cleanup materials (as determined by the record keeping requirements specified in Section C.2.).

- b. Emission Limitation:  
0.551 lb/hr PM/PM10
- Applicable Compliance Method:  
If testing is required to demonstrate compliance with the allowable emission limitation of 0.551 pound PM/PM10 per hour, then testing shall be conducted using the following method: Method 5, 40 CFR Part 60, Appendix A.
- c. Emission Limitation:  
2.41 TPY PM/PM10
- Applicable Compliance Method:  
The 2.41 TPY limitation was developed by multiplying the 0.551 lb/hr limitation by the maximum operating schedule of 8760 hours per year, and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.
- d. Emission Limitation:  
32.60 TPY OC
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
- e. Emission Limitation:  
32.60 TPY OC, based upon a rolling, 12-month summation
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.3.
- f. Emission Limitation:  
HAPs emissions 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs
- Applicable Compliance Method:  
Compliance shall be based upon the record keeping requirements specified in Section C.1.
- g. Organic Compound Content Limitations:  
Ink: 45% by weight OC  
Fountain Solution: 0.65 lb OC/gallon  
Blanket Wash: 6.6 lbs OC/gallon

**Issued: To be entered upon final issuance**

Applicable Compliance Method:

Formulation data or USEPA method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks and coatings.

- h. Compliance with the usage rate limitations for all materials employed (see Sections A.2.2.d. through A.2.2.f.) shall be based upon the record keeping requirements specified in Section C.3.
  - i. Compliance with the daily cleanup usage rate limitation specified in Section B.2. shall be based upon the record keeping requirements specified in Section C.2.
2. The OC emission rate for inks is calculated on a "worst case" basis for the ink with the highest OC content as follows:  

$$E = \text{OC content of the ink (in pounds OC/pounds ink)} \times \text{pounds of ink employed per unit time} \times 1\text{-}\% \text{retention.}$$
  3. The OC emission rate for fountain solutions and cleanup materials shall be based on OC content information from the manufacturer and is calculated as follows:  

$$E = \text{OC content of the fountain solution or cleanup material (pounds per gallon)} \times \text{gallons employed per unit time} \times 1\text{-}\% \text{retention.}$$
  4. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.
  5. The permittee shall conduct, or have conducted, emission testing for emissions unit R011 in accordance with the following requirements:
    - a. The emission testing shall be conducted within six months after issuance of this permit.
    - b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation for R011.
    - c. The following test method(s) shall be employed to demonstrate compliance with the allowable control efficiency: Method 25 of 40 CFR Part 60, if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

**F. Miscellaneous Requirements**

1. This permit allows the use of materials (typically coatings and cleanup materials) specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: Glycol Ethers  
 TLV (ug/m3): 121,000

**CJ Krehbiel Co**

PTI 11 01011

**Issue****Facility ID: 1431070992****Emissions Unit ID: R011**

Maximum Hourly Emission Rate (lbs/hr): 73.92  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,775  
 MAGLC (ug/m3): 2,880

Pollutant: Ethylene Glycol  
 TLV (ug/m3): 100,000  
 Maximum Hourly Emission Rate (lbs/hr): 9.39  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 351.8  
 MAGLC (ug/m3): 2,381

Pollutant: Naphthalene  
 TLV (ug/m3): 52,400  
 Maximum Hourly Emission Rate (lbs/hr): 26.02  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 977.8  
 MAGLC (ug/m3): 1,247

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- 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 specified in the above table;
- b. Changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. Changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and
- d. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
- c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

2. The following terms and conditions of this permit are federally enforceable, pursuant to OAC rule 3745-31-05(D): A.2.2.a., A.2.2.b., A.2.2.d., A.2.2.e., A.2.2.f., A.2.2.j., B.1., B.4., C.1., C.2., C.3., C.5., D.1., D.2., D.3., D.4., D.5., and E.5.
3. For all inks employed, the worst case OC content can be used to calculate emissions.