

Synthetic Minor Determination and/or  Netting Determination

Permit To Install 14-05691

**A. Source Description**

Sun Chemical is a paint and ink mixing facility located in Cincinnati, Ohio. The facility only mixes final products to the customer demand and there is no actual manufacturing of paints or inks. Once the paint or ink is mixed to the proper specifications, the material is then poured into barrels and shipped to the customer.

**B. Facility Emissions and Attainment Status**

Actual facility VOC emissions are 0.48 lbs/hr and 0.5 TPY. Hourly allowable VOC emissions vary by source. Potential to emit VOC amounts for this permitting action are 109 tons per year. With this permitting action, the annual allowable VOC emissions are 46.4 TPY. The facility is located in Hamilton County which is nonattainment for ozone and nitrogen oxides. Actual facility PM/PM10 emissions are less than 1 lb/hr and 0.44 TPY. Hourly allowable PM/PM10 emissions vary by source but the three newly installed sources will not mix dry material which results in no PM/PM10 emissions. Annual allowable PM/PM10 emissions are 0.44 TPY. The facility HAP emissions are less than 9.9 TPY of any individual HAP and 24.9 TPY of combined HAP's.

**C. Source Emissions**

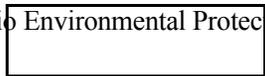
Most of the emissions from the facility come from the liquid ink mixers and dispenser (P022-P033). Sources P022-P030 are equipped with covers and connected to a baghouse. Sources P031-P033 do not mix dry material and are not required to have covers or dust collection. All liquid ink mixers were previously grouped under source P001 however the mixers were re-permitted as separate emission units P022-P030. Sources P003-P021 are paint mixers that are currently on registration status.

**D. Conclusion**

The facility wants to add three liquid ink mixers to their synthetic minor group permit. The permittee will maintain the original material usage and VOC content records to demonstrate compliance with the permit limits. The facility will accept a facility wide limit of less than 10 tons per year for each individual HAP and less than 25 tons per year for combined HAPs to avoid Title V applicability. The facility will also keep rolling 12-month summation records to demonstrate compliance with the permit limits.



State of Ohio Environmental Protection Agency



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

**CERTIFIED MAIL**

Street Address:

Mailing Address:

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

Lazarus Gov. Center

**Application No:** 14-05691

**Fac ID:** 1431480237

**DATE:** 4/28/2005

Sun Chemical  
Grant Bush  
135 West Lake Street  
Northlake, IL 60164

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 **\$2850** will be due. Please do not submit any payment now.

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

Sincerely,

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

CC: USEPA

HCDES

OH-KY-IN Reg Council of Govs

KY

IN

## HAMILTON COUNTY

PUBLIC NOTICE  
ISSUANCE OF DRAFT PERMIT TO INSTALL **14-05691** FOR AN AIR CONTAMINANT SOURCE FOR  
**Sun Chemical**

On 4/28/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Sun Chemical**, located at **12049 Centron Place, Cincinnati, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05691:

**Two liquid ink mixers and one liquid ink dispenser with two air mixers.**

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

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



**Permit To Install  
Terms and Conditions**

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

**DRAFT PERMIT TO INSTALL 14-05691**

Application Number: 14-05691  
Facility ID: 1431480237  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Sun Chemical  
Person to Contact: Grant Bush  
Address: 135 West Lake Street  
Northlake, IL 60164

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**12049 Centron Place  
Cincinnati, Ohio**

Description of proposed emissions unit(s):  
**Two liquid ink mixers and one liquid ink dispenser with two air mixers.**

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

Sun Chemical

Facility ID: 1431480237

PTI Application: 14-05691

Issued: To be entered upon final issuance

**Part I - GENERAL TERMS AND CONDITIONS**

**A. Permit to Install General Terms and Conditions**

**1. Compliance Requirements**

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

**2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

**3. Records Retention Requirements**

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

**4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any

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information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

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

**9. Construction of New Sources(s)**

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

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

**10. Public Disclosure**

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

**11. Applicability**

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

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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

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 ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

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**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	46.4
PM/PM10	0.44
HAP	9.9
HAPs	24.9

**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>	source for purposes of non attainment review).
P022 - Liquid ink mixer 1 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements).
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
	OAC rule 3745-31-05(C) (to avoid being a major stationary	OAC rule 3745-17-11

Applicable Emissions  
Limitations/Control Measures

Organic compound (OC) emissions from the mixer shall not exceed 2.28 pounds per hour.

See term and condition B.1.

Particulate emissions (PE) from the mixer shall not exceed 0.03 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.b.

Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.03 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.d.

See term and condition A.2.c.

PE = PM10

Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.

See term and conditions A.2.a. and B.2

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

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).

Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed}^*)/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals)
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1. and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: P022

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

2.28 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 600 pounds per hour) x (35% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.03 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 600 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 600 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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

The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year} \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year} \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1 - (80\% \text{ capture efficiency})\})] / (2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

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

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P023 - Liquid ink mixer 2 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

Sun C

PTI A

Emissions Unit ID: P023

Issued: To be entered upon final issuance

Applicable Emissions  
Limitations/Control Measures

Organic compound (OC) emissions from the mixer shall not exceed 1.52 pounds per hour.

See terms and conditions B.1.

Particulate emissions (PE) from the mixer shall not exceed 0.02 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.b.

See term and condition A.2.d.

Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.c.

Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.

PE = PM10

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

See term and condition A.2.a. and B.2.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).

Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

**2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.

**2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.

**2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

**2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/ pound OC processed}^*)/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
    - a. The name and identification number of each batch of ink produced containing a HAP(s).
    - b. The number of pounds of each batch of ink produced.
    - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

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4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

1.52 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 400 pounds per hour) x (35% percent by weight VOC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/pound OC processed\*).

- b. Emission Limitation:

0.02 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 400 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 400 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

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If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

## Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

- 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>	
P024 - Liquid ink mixer 3 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

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<u>Applicable Emissions Limitations/Control Measures</u>	
Organic compound (OC) emissions from the mixer shall not exceed 1.90 pounds per hour.	See term and condition B.1.
Particulate emissions (PE) from the mixer shall not exceed 0.03 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.b.
Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.03 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.d.  See term and condition A.2.c.
PE = PM10	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.
See term and condition A.2.a. and B.2.	The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).	
Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:

- a. The name and identification of each batch of ink produced.
- b. The amount of each organic material used in the formulation of inks, in pounds.

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
    - a. The name and identification number of each batch of ink produced containing a HAP(s).
    - b. The number of pounds of each batch of ink produced.
    - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.
    - d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].

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- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

- 3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

- 1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
- 2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and/or B.2.
- 3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.
- 4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate limitation.

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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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

1.90 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 500 pounds per hour) x (35% percent by weight VOC content, pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.03 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 500 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 500 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM-PM10 emission rate was calculated by: [(12,393,201

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pounds of ink per year) x (35% added pigment) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (12,393,201 pounds of ink per year) x (35% added pigment) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}]/(2000) for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

## Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

## Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

## Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

## Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the

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procedures specified in OAC rule 3745-17-03(B)(1).

## h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

## Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P025 - Liquid ink mixer 4 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

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<u>Applicable Emissions Limitations/Control Measures</u>	
Organic compound (OC) emissions from the mixer shall not exceed 1.52 pounds per hour.	See term and condition B.1.
Particulate emissions (PE) from the mixer shall not exceed 0.02 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.b.
Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.d.
PE = PM10	See term and condition A.2.c.
See term and condition A.2.a. and B.2.	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.
The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).	The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).
Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

**2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.

**2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.

**2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

**2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in term and condition A.1 and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: P025

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

1.52 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 400 pounds per hour) x (35% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed \*).

- b. Emission Limitation:

0.02 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 400 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 400 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

**Sun Chemical**  
**PTI Application: 14-05601**  
**Issued**

**Facility ID: 1431480237**

Emissions Unit ID: **P025**

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\*The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

Issued: To be entered upon final issuance

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

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

- 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>	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
P026 - Liquid ink mixer 5 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

**Sun C**

**PTI A**

Emissions Unit ID: **P026**

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

Applicable Emissions  
Limitations/Control Measures

Organic compound (OC) emissions from the mixer shall not exceed 0.95 pound per hour.

See term and condition B.1.

Particulate emissions (PE) from the mixer shall not exceed 0.014 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.b.

See term and condition A.2.d.

Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.014 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See term and condition A.2.c.

Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.

PE = PM10

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

See term and condition A.2.a. and B.2.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).

Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
    - a. The name and identification number of each batch of ink produced containing a HAP(s).
    - b. The number of pounds of each batch of ink produced.
    - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

- 3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

- 1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
- 2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1. and/or B.2.
- 3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: P026

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

0.95 lb/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 250 pounds per hour) x (35% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.014 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 250 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 250 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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

The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

Issued: To be entered upon final issuance

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P027 - Liquid ink mixer 6 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

**Sun C****PTI A**Emissions Unit ID: **P027****Issued: To be entered upon final issuance**

<u>Applicable Emissions Limitations/Control Measures</u>	
Organic compound (OC) emissions from the mixer shall not exceed 3.81 pounds per hour.	See term and condition B.1.
Particulate emissions (PE) from the mixer shall not exceed 0.06 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.b.
Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.06 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.d.
PE = PM10	See term and condition A.2.c.
See term and condition A.2.a. and B.2.	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.
The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).	The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).
Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
    - a. The name and identification number of each batch of ink produced containing a HAP(s).
    - b. The number of pounds of each batch of ink produced.
    - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

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4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

3.81 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 1000 pounds per hour) x (35% percent by weight VOC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/pound OC processed\*).

- b. Emission Limitation:

0.06 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 1000 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 1000 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\*The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P028 - Liquid ink mixer 7 with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

**Sun C****PTI A**Emissions Unit ID: **P028****Issued: To be entered upon final issuance**

<u>Applicable Emissions Limitations/Control Measures</u>	
Organic compound (OC) emissions from the mixer shall not exceed 4.06 pounds per hour.	See term and condition B.1.
Particulate emissions (PE) from the mixer shall not exceed 0.06 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.b.
Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.06 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.d.
PE = PM10	See term and condition A.2.c.
See term and condition A.2.a. and B.2.	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.
The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).	The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).
Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
    - a. The name and identification number of each batch of ink produced containing a HAP(s).
    - b. The number of pounds of each batch of ink produced.
    - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: **P028**

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

4.06 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 1067 pounds per hour) x (35% percent by weight OC content, in pounds per OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.06 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 1067 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 1067 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

**Sun Chemical**  
**PTI Application: 14-05601**  
**Issued**

**Facility ID: 1431480237**

Emissions Unit ID: **P028**

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

- 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>	
P029 - 0.5 HP air ink mixer with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

Sun C

PTI A

Emissions Unit ID: P029

Issued: To be entered upon final issuance

Applicable Emissions  
Limitations/Control Measures

Organic compound (OC) emissions from the mixer shall not exceed 0.46 pounds per hour.

See term and condition B.1.

Particulate emissions (PE) from the mixer shall not exceed 0.01 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

See terms and conditions A.2.b.

See term and condition A.2.d.

See term and condition A.2.c.

Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.01 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.

Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.

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

PE = PM10

See term and condition A.2.a. and B.2.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).

Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: P029

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

0.46 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 120 pounds per hour) x (35% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.01 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 120 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 120 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

**Sun Chemical**  
**PTI Application: 14-05601**  
**Issued**

**Facility ID: 1431480237**

Emissions Unit ID: **P029**

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\*The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

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

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	OAC rule 3745-31-05(C)(to avoid being a major stationary source for purposes of non attainment review). OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
P030 - 0.25 HP air ink mixer with cover and baghouse - modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-07(B)(1)
		OAC rule 3745-21-07(G)(2)
		OAC rule 3745-17-11

**Sun C****PTI A**Emissions Unit ID: **P030****Issued: To be entered upon final issuance**

<u>Applicable Emissions Limitations/Control Measures</u>	
Organic compound (OC) emissions from the mixer shall not exceed 0.12 pound per hour.	See term and condition A.2.b.
Particulate emissions (PE) from the mixer shall not exceed 0.01 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	See term and condition A.2.d. See term and condition A.2.c.
Particulate matter 10 microns and less (PM10) emissions from this emissions unit shall not exceed 0.01 pound per hour and 0.44 TPY for emissions units P022 - P030, combined.	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.  The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).
PE = PM10	
See term and condition A.2.a. and B.2.	
The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1).	
Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations and use of a cover and baghouse.
- 2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
- The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
- 2.c** Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- 2.d** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 2.e** The hourly OC and PM-PM10 emissions limitations outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.

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- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and/or B.2.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.

Emissions Unit ID: P030

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Term and condition A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

0.12 lb/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 32 pounds per hour) x (35% percent by weight OC content, pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/ pound OC processed\*).

- b. Emission Limitation:

0.01 lb/hr PM-PM10

Applicable Compliance Method:

The hourly PM-PM10 emission rate is based on the emission units potential to emit. The potential to emit was calculated by: [(maximum production rate of 32 pounds per hour) x (35% added pigment) x (80% equipment usage\*\*) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (99.9% control efficiency)} + (maximum production rate of 32 pounds per hour) x (35% added pigment) x (80% equipment usage\*) x (0.1% AP-42 emission factor) x {1-(80% capture efficiency)}].

- c. Emission Limitation:

0.44 TPY PM-PM10 for emissions units P022 - P030, combined.

Applicable Compliance Limitation:

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

The annual PM-PM10 emission rate is based on the emission units potential to emit. The emissions unit is assumed to be in compliance as long as compliance with the hourly rate is maintained. The annual PM<sub>PM10</sub> emission rate was calculated by:  $[(12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (12,393,201 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)$  for emissions units P022 - P030 combined.

## d. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## e. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be demonstrated by the record keeping requirements specified in term C.2.

## f. Emission Limitation:

19,465,201 pounds of ink per year

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

## g. Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

**Sun Chemical**  
**PTI Application: 14-05601**  
**Issued**

**Facility ID: 1431480237**

Emissions Unit ID: **P030**

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, and the procedures specified in OAC rule 3745-17-03(B)(3).

\*\*The 80% equipment usage is based on the maximum mixing capacity of the mixer.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

Sun C

PTI A

Emissions Unit ID: P031

**Issued: To be entered upon final issuance****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P031 - Liquid ink mixer 10	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emission unit shall not exceed 4.14 pounds per hour.
		See terms and conditions B.1 - B.3.
	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review). OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C) and 3745-35-07(B).  Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
	OAC rule 3745-35-07(B) (to avoid being subject to OAC rule 3845-31-28 and Title V permitting requirements)	See term and condition A.2.b.
	OAC rule 3745-21-07(G)(2)	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio

**Sun C****PTI A**Emissions Unit ID: **P031****Issued: To be entered upon final issuance**EPA permitting call held July 18,  
2002.**2. Additional Terms and Conditions**

**2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.

**2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**2.c** The hourly OC emissions limitation outlined is based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The inks mixed in this source shall not contain dry material.
3. The OC content of the inks mixed in this emissions unit shall not exceed 95% by weight.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed})/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
  - f. A record of any dry materials used, in pounds.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink

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produced in pounds of individual HAP per pound of ink.

- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.
4. The permit to install for this emissions unit P031 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: 2-butoxyethanol

TLV (ug/m3): 96,660

Maximum Hourly Emission Rate (lbs/hr): 9.11

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 2080

MAGLC (ug/m3): 2302

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

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- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Section A.1 and B.3.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
  
4.14 lbs/hr OC  
  
Applicable Compliance Method:  
  
The hourly OC emission rate is based on the emission units potential to emit. The

Emissions Unit ID: **P031**

potential to emit was calculated by: (maximum production rate of 400 pounds per hour) x (95% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/pound of OC processed\*), as submitted in Permit to Install application 14-05691, received on March 3, 2005.

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

b. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

c. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs from the facility

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Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be determined by the record keeping requirements specified in term C.2.

d. Usage Limitation:

19,465,201 pounds of ink per year; no dry material

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

2. Compliance with the usage limitation in term B.2. shall be based upon the record keeping requirements as specified in term C.1.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.

Sun C

PTI A

Emissions Unit ID: P032

**Issued: To be entered upon final issuance****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P032 - Liquid ink mixer 11	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emission unit shall not exceed 11.03 pounds per hour.  See terms and conditions B.1 - B.3.
	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C) and 3745-35-07(B).
	OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)	Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
	OAC rule 3745-35-07(B) (to avoid being subject to OAC rule 3845-31-28 and Title V permitting requirements)	See term and condition A.2.b.
	OAC rule 3745-21-07(G)(2)	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio

EPA permitting call held July 18,  
2002.

## 2. Additional Terms and Conditions

**2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.

**2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**2.c** The hourly OC emissions limitation outlined is based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

## B. Operational Restrictions

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The inks mixed in this source shall not contain dry material.
3. The OC content of the inks mixed in this emissions unit shall not exceed 95% by weight.

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

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed}^*)/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight for each batch.
  - f. A record of any dry materials used, in pounds.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031(Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink

produced in pounds of individual HAP per pound of ink.

- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.
4. The permit to install for this emissions unit P032 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: 2-butoxyethanol

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TLV (ug/m3): 96,660

Maximum Hourly Emission Rate (lbs/hr): 9.11

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 2080

MAGLC (ug/m3): 2302

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Section A.1 and B.3.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
  
11.03 lbs/hr OC  
  
Applicable Compliance Method:  
  
The hourly OC emission rate is based on the emission units potential to emit. The

**Sun C****PTI A**Emissions Unit ID: **P032****Issued: To be entered upon final issuance**

potential to emit was calculated by: (maximum production rate of 1067 pounds per hour) x (95% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/pound of OC processed\*), as submitted in Permit to Install application 14-05691, received on March 3, 2005.

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

## b. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

## c. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs from the facility

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## Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be determined by the record keeping requirements specified in term C.2.

## d. Usage Limitation:

19,465,201 pounds of ink per year; no dry material

## Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

2. Compliance with the usage limitation in term B.2. shall be based upon the record keeping requirements as specified in term C.1.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.

Sun C

PTI A

Emissions Unit ID: P033

**Issued: To be entered upon final issuance****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P033 - Liquid ink dispenser with two air mixers	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emission unit shall not exceed 3.05 pounds per hour.
	OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review).	See terms and conditions B.1 - B.3.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(C) and 3745-35-07(B).
	OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)	Organic compound (OC) emissions from emissions units P022 - P033, combined shall not exceed 46.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
	OAC rule 3745-35-07(B) (to avoid being subject to OAC rule 3845-31-28 and Title V permitting requirements)	See term and condition A.2.b.
	OAC rule 3745-21-07(G)(2)	Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio

EPA permitting call held July 18,  
2002.

## 2. Additional Terms and Conditions

**2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.

**2.b** The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis) shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with this limit upon permit issuance.

**2.c** The hourly OC emissions limitation outlined is based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

## B. Operational Restrictions

1. The maximum annual production rate for emissions units P022 - P033 combined shall not exceed 19,465,201 pounds of ink per year, based upon a rolling, 12-month summation of the production rates. The permittee has existing records to demonstrate compliance with this limit upon permit issuance.
2. The inks mixed in this source shall not contain dry material.
3. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

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

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022 - P033:
  - a. The name and identification of each batch of ink produced.
  - b. The amount of each organic material used in the formulation of inks, in pounds.
  - c. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of  $[(b) \times (0.0136 \text{ pound OC emitted/pound OC processed}^*)/2000]$  for each liquid organic material used in the formulation of inks.

\* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. The rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven calendar months emission totals).
  - e. The OC content, in percent by weight, for each batch.
  - f. A record of any dry materials used, in pounds.
2. The permittee shall collect and record the following information each month for emissions units P003 (Paste Ink Mixer 1), P004 (Paste Ink Mixer 2), P005 (Paste Ink Mixer 3), P006 (Paste Ink Mixer 4), P007 (Paste Ink Mixer 5), P008 (Paste Ink Mixer 6), P009 (Paste Ink Mixer 7), P010 (Paste Ink Mixer 8), P011 (Paste Ink Mixer 9), P012 (Paste Ink Mixer 10), P013 (Paste Ink Mixer 11), P014 (3-Roll Mill 1), P015 (3-Roll Mill 2), P016 (3-Roll Mill 3), P017 (3-Roll Mill 4), P018 (3-Roll Mill 5), P019 (3-Roll Mill 6), P020 (Paste Ink Mixer 12), P021 (Paste Ink Mixer 13), P022 (Liquid Ink Mixer 1), P023 (Liquid Ink Mixer 2), P024 (Liquid Ink Mixer 3), P025 (Liquid Ink Mixer 4), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P028 (Liquid Ink Mixer 7), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031(Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser with Two Air Mixers), two 2 HP Paste Mixers (deminimis) and five 0.5 HP Paste Mixers (deminimis):
  - a. The name and identification number of each batch of ink produced containing a HAP(s).
  - b. The number of pounds of each batch of ink produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink

produced in pounds of individual HAP per pound of ink.

- d. The total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)].
- e. The total individual HAP emissions for each HAP from all inks employed in pounds or tons per month [for each individual HAP, the summation of (b) x 1.36 percent x (c)].
- f. The total combined HAP emissions from all inks employed in pounds or tons per month [the summation of (b) x 1.36 percent x (d)].
- g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

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.

3. The permittee shall maintain monthly record of the following information:
  - a. The production rate for each month, in pounds of ink.
  - b. The rolling, 12-month summation of the production rates, in pounds of ink.
4. The permit to install for this emissions unit P033 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: 2-butoxyethanol

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**Sun C**

**PTI A**

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TLV (ug/m3): 96,660

Maximum Hourly Emission Rate (lbs/hr): 9.11

Predicted 1-Hour Maximum Ground-Level  
Concentration (ug/m3): 2080

MAGLC (ug/m3): 2302

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**D. Reporting Requirements**

Emissions Unit ID: **P033**

1. The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022 - P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Section A.1 and B.3.
3. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.b. If no exceedances occurred during the reporting period then a report is required stating so.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate 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 limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

3.05 lbs/hr OC

Applicable Compliance Method:

The hourly OC emission rate is based on the emission units potential to emit. The potential to emit was calculated by: (maximum production rate of 800 pounds per hour) x (35% percent by weight OC content, in pounds of OC processed) x (80% equipment usage\*\*) x (0.0136 pound OC emitted/pound OC processed\*), as submitted in Permit to Install application 14-05691, received on March 3, 2005.

\*\* The 80% equipment usage is based on the maximum mixing capacity of the mixer.

- b. Emission Limitation:

46.4 TPY OC from emissions units P022 - P033 combined

Applicable Compliance Method:

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Compliance with the annual organic compound emission limitations in term A.1. shall be based upon the record keeping requirements as specified in term C.1.

c. Emission Limitation:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs from the facility

Applicable Compliance Method:

Compliance with the HAP emission limitations in term A.2.b. shall be determined by the record keeping requirements specified in term C.2.

d. Usage Limitation:

19,465,201 pounds of ink per year; no dry material

Applicable Compliance Method:

Compliance with the production rate limitation in term B.1. shall be based upon the record keeping requirements as specified in term C.3.

2. Compliance with the usage limitation in term B.2. shall be based upon the record keeping requirements as specified in term C.1.

**F. Miscellaneous Requirements**

1. The terms and conditions in this permit supersede Permit to Install 14-4638, as issued on May 12, 1999 and Permit to Install 14-1080, as issued on September 17, 1986.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.