

Facility ID: 1431480237 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P022 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|---|---|
| P022 - Liquid ink mixer 1 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 2.28 pounds per hour. |
| | | Particulate emissions (PE) from the mixer shall not exceed 0.03 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. |
| | | Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.03 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. |
| | | PE = PM10 See term and conditions A.2.a. and B.2. |
| | 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), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B) (1). Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 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 Title V permitting requirements) | See term and condition B.1. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V | See term and condition A.2.b. |

permitting requirements)

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

See term and condition A.2.d.

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

See term and condition A.2.c.

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.

OAC rule 3745-17-11

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

2. Additional Terms and Conditions

- (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.
- 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), , P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), , P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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.
- Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 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

- The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
- The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. Monitoring and/or Record Keeping Requirements

- 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, P023, P024, P026, P027, P029, P030, P031, P032 and P033:
 - The name and identification of each batch of ink produced.
 - The amount of each organic material used in the formulation of inks, in pounds.
 - The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of [(b) x (0.0136 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.
 - 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)
 - The OC content, in percent by weight, for each batch.
- 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:
 - The name and identification number of each batch of ink produced containing a HAP(s).
 - The number of pounds of each batch of ink produced.
 - The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.
 - 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.

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:
0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: [(9,960,159 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)}] + (9,960,159 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, P023, P024, P026, P027, P031 and P032 combined.

d. Emission Limitation:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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. Usage Limitation:
16,126,240 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P023 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|---|---|
| P023 - Liquid ink mixer 2 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 1.52 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.02 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 |

See term and conditions 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).

OAC rule 3745-31-05(C)
(to avoid being a major stationary source for purposes of non attainment review)

Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 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 Title V permitting requirements)

See term and condition B.1.

OAC rule 3745-35-07(B)
(to avoid being subject to Title V permitting requirements)

See term and condition A.2.b.

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

See term and condition A.2.d.

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

See term and condition A.2.c.

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.

OAC rule 3745-17-11

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

2. Additional Terms and Conditions

(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.

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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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.

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

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

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, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.

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

C. Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:

- 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.

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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.
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:
0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: $\{[(9,960,159 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{(80\% \text{ capture efficiency}) \times (99.9\% \text{ control efficiency})\} + (9,960,159 \text{ pounds of ink per year}) \times (35\% \text{ added pigment}) \times (0.1\% \text{ AP-42 emission factor}) \times \{1-(80\% \text{ capture efficiency})\}]/(2000)\}$ for emissions units P022, P023, P024, P026, P027, P031 and P032 combined.

d. Emission Limitation:

38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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. Usage Limitation:

16,126,240 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P024 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|--|--|
| P024 - Liquid ink mixer 3 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 1.90 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.03 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.03 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 See term and conditions 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, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance. See term and condition B.1. See term and condition A.2.b. See term and condition A.2.d. 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. The emission limitation specified by this rule is less stringent than the requirements of 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 | |

2. **Additional Terms and Conditions**

- (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.
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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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.
Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
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, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
- 2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. **Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and

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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:

- 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.

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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.
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 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 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:

0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: [(9,960,159 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)} + (9,960,159 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, P023, P024, P026, P027, P031 and P032 combined.

d. Emission Limitation:

38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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. Usage Limitation:

16,126,240 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P026 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with

ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|--|---|
| P026 - Liquid ink mixer 5 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 0.95 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.014 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.014 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 See term and conditions 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). |
| | OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review) | Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance. See term and condition B.1. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See term and condition A.2.b. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See term and condition A.2.d. |
| | OAC rule 3745-17-07(A)(1) | See term and condition A.2.c. |
| | OAC rule 3745-17-07(B)(1) | Exempt, due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002. |
| | OAC rule 3745-21-07(G)(2) | The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-11 | |

2. Additional Terms and Conditions

- (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.
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), , P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), , P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031(Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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.

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

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

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, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:
 - 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.

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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.
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 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 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:
0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: [(9,960,159 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)}] + (9,960,159 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, P023, P024, P026, P027, P031 and P032 combined.

d. Emission Limitation:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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. Usage Limitation:
16,126,240 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P027 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|--|--|
| P027 - Liquid ink mixer 6 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 3.81 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.06 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.06 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 See term and conditions A.2.a. and B.2. |
| | OAC rule 3745-31-05(C) (to avoid being a major stationary source for purposes of non attainment review) | Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance. See term and condition B.1. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See term and condition A.2.b. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See term and condition A.2.b. |
| | OAC rule 3745-17-07(A)(1) | See term and condition A.2.d. |
| | OAC rule 3745-17-07(B)(1) | See term and condition A.2.c. |
| 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. | |
| OAC rule 3745-17-11 | The emission limitation specified by this rule is less | |

stringent than the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- (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.
- 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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.
- Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
- Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
- 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, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:
 - 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:
- The production rate for each month, in pounds of ink.
 - The rolling, 12-month summation of the production rates, in pounds of ink.

D. Reporting Requirements

- The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
- 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.
- 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.
- The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate limitation.
- The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

- 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 OC 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:
0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: [(9,960,159 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)}] + (9,960,159 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, P023, P024, P026, P027, P031 and P032 combined.

d. Emission Limitation:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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. Usage Limitation:
16,126,240 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P029 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|---|--|
| P029 - 0.5 HP air ink mixer with cover | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 0.46 pounds per hour. See term and condition A.2.a. and B.2. |
| | 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). Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 tons per year (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 Title V permitting requirements) | See term and condition B.1. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See terms and conditions 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

- (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.
- 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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 hourly OC emissions limitation outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.

B. Operational Restrictions

1. The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:
 - 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.

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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.
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:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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

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.
 - d. Usage Limitation:
16,126,240 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.
- **The 80% equipment usage is based on the maximum mixing capacity of the mixer.

F. Miscellaneous Requirements

1. The terms and conditions in PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P030 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

- (a) None.
- 2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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> |
|---|---|--|
| P030 - 0.5 HP air ink mixer with cover | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from the mixer shall not exceed 0.46 pounds per hour. See term and condition A.2.a. and B.2. |
| | 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). Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 tons per year (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 Title V permitting requirements) | See term and condition B.1. |
| | OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements) | See terms and conditions 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

- (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.
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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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 hourly OC emissions limitation outlined are based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.

B. Operational Restrictions

- 1. The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
- 2. The OC content of the inks mixed in this emissions unit shall not exceed 35% by weight.

C. Monitoring and/or Record Keeping 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:

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.

D. Reporting Requirements

- The permittee shall submit annual reports to Hamilton County Department of Environmental Services which specify the total organic compound emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033. These reports shall be submitted by January 30 of each year and cover the previous calendar year.
- The permittee shall submit deviation (excursion) reports for any exceedance of the emission limitations listed in Term and condition A.1 and B.2.
- 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.
- The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate limitation.
- The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

- 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:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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

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.

d. Usage Limitation:
16,126,240 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.

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

F. Miscellaneous Requirements

1. The terms and conditions in PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C., D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P031 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from this emission unit shall not exceed 4.14 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.02 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 See terms and conditions B.1 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 |
| | OAC rule 3745-31-05(C) | |

| | |
|---|---|
| <p>(to avoid being a major stationary source for purposes of non attainment review)</p> <p>OAC rule 3745-35-07(B) (to avoid being subject to Title V permitting requirements)</p> <p>OAC rule 3745-35-07(B) (to avoid being subject to OAC rule 3845-31-28 and Title V permitting requirements)</p> <p>OAC rule 3745-21-07(G)(2)</p> <p>OAC rule 3745-17-11</p> <p>OAC rule 3745-17-07(A)(1)</p> <p>OAC rule 3745-17-07(B)(1)</p> | <p>units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance. See term and condition B.1.</p> <p>See term and condition A.2.b.</p> <p>Exempt due to Ohio Supreme Court decision of July 11, 2001 and the Ohio EPA permitting call held July 18, 2002.</p> <p>The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).</p> <p>See term and condition A.2.d.</p> <p>See term and condition A.2.e.</p> |
|---|---|

2. **Additional Terms and Conditions**

(a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.
 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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 hourly OC and PM-PM10 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.
 Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.
 Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

B. **Operational Restrictions**

1. The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 95% by weight.

C. **Monitoring and/or Record Keeping 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 P031 - 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:

- 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 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:"

- 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.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.
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 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:
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:

0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: {[(9,960,159 pounds of ink per year) x (35% added pigment) x (0.1% AP-42 emission factor) x {(80% capture efficiency) x (1-99.9% control efficiency)}] + (9,960,159 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, P023, P024, P026, P027, P031 and P032, combined.

d. Emission Limitation:

38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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 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.

f. Usage Limitation:

16,126,240 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).

- 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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
- 2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P032 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

- 1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

- 2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) None.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 with cover and baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from this emission unit shall not exceed 4.14 pounds per hour. Particulate emissions (PE) from the mixer shall not exceed 0.02 pound per hour and 0.35 tons per year (TPY) for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. Particulate matter 10 microns and less in diameter (PM10) emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.35 TPY for emissions units P022, P023, P024, P026, P027, P031 and P032, combined. PE = PM10 See terms and conditions B.1 and B.2. |
| | 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), 3745-35-07(B), 3745-17-07(A)(1) and 3745-17-07(B)(1). Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 TPY OC, based on a rolling, 12-month summation. The permittee has existing records to demonstrate compliance with this limit upon permit issuance. See term and condition B.1. |
| | 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 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. |
| OAC rule 3745-17-11 | The emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3). |
| OAC rule 3745-17-07(A)(1) | See term and condition A.2.d. |
| OAC rule 3745-17-07(B)(1) | See term and condition A.2.e. |

2. **Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.
- 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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 hourly OC and PM-PM10 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.
- Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.
- Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

B. **Operational Restrictions**

1. The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 95% by weight.

C. **Monitoring and/or Record Keeping 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 P031 - P033:
- The name and identification of each batch of ink produced.
 - The amount of each organic material used in the formulation of inks, in pounds.
 - The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:

The summation of [(b) x (0.0136 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.
 - 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).
 - 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:
- The name and identification number of each batch of ink produced containing a HAP(s).
 - The number of pounds of each batch of ink produced.
 - The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink.
 - 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

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:"

- 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.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.
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 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:
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:

0.35 TPY PM-PM10 for emissions units P022, P023, P024, P026, P027, P031 and P032, 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: [(9,960,159 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)}] + (9,960,159 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, P023, P024, P026, P027, P031 and P032, combined.

d. Emission Limitation:

38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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 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.

f. Usage Limitation:

16,126,240 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).

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 PTI 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431480237 Emissions Unit ID: P033 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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 | OAC rule 3745-31-05(A)(3) (PTI 14-05691) | Organic compound (OC) emissions from this emission unit shall not exceed 8.27 pounds per hour. See terms and conditions A.2.a and B.2. |
| | 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). Organic compound (OC) emissions from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033, combined shall not exceed 38.4 tons per year (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 Title V permitting requirements) | See term and condition B.1. |
| | 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

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the usage and emissions limitations.
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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit 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 hourly OC emission limitation outlined is based upon the emissions unit's Potential To Emit (PTE). Therefore, no records are required to demonstrate compliance with this limit.

B. Operational Restrictions

1. The maximum annual production rate for emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and P033 combined shall not exceed 16,126,240 pounds of ink per year, based upon a rolling, 12-month summation of the production rates.
2. The OC content of the inks mixed in this emissions unit shall not exceed 95% by weight.

C. Monitoring and/or Record Keeping 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 P031 - 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) x (0.0136 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), P026 (Liquid Ink Mixer 5), P027 (Liquid Ink Mixer 6), P029 (Liquid Ink Mixer 8), P030 (Liquid Ink Mixer 9), P031 (Liquid Ink Mixer 10), P032 (Liquid Ink Mixer 11), P033 (Liquid Ink Dispenser), two 2 HP Paste Mixers (deminimis), five 0.5 HP Paste Mixers (deminimis), and other deminimis sources, as defined in OAC rule 3745-15-05, installed subsequent to the issuance of this permit:

- 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

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:"

- 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, P023, P024, P026, P027, P029, P030, P031, P032 and 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.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.
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:
8.27 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 (95% 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:
38.4 TPY OC from emissions units P022, P023, P024, P026, P027, P029, P030, P031, P032 and 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

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:

16,126,240 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.

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 PT1 14-05691, as issued on November 11, 2005, supersede Permit to Install 14-4638, as issued on May 12, 1999, Permit to Install 14-1080, as issued on September 17, 1986 and Permit to Install 14-05691, as issued on June 21, 2005.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1 - C.3, D. and E.