Facility ID: 1677130073 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.

Go to Part II for Emissions Unit K001
Go to Part II for Emissions Unit K002
Go to Part II for Emissions Unit K004
Go to Part II for Emissions Unit R001
Go to Part II for Emissions Unit R002

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Facility ID: 1677130073 Emissions Unit ID: K001 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
sheetfed coldset lithographic printing line	OAC rule 3745-31-05 (PTI 16-1867)	7.3 TPY of organic compounds (OC) See A.2.a below.
	OAC rule 3745-21-07(G)	8 lbs/hr of OC 40 lbs/day of OC

2. **Additional Terms and Conditions**

   (a) Pursuant to the best available technology (BAT) requirements for new sources, as covered under Ohio Administrative Code (OAC) rule 3745-31-05, the permittee shall perform the following:

   i. Employment of coldset, ultra-violet (UV) cured inks for the lithographic printing presses.

   ii. Employment of natural gas as fuel for the common hot-air dryer for the silk screen printing presses.

   iii. Employment of low HAP content inks, cleanup materials, and all other solvents.

   iv. Hand wipe cleanup rags kept in sealed containers when not in use and/or for proper disposal.

   v. Cleanup solvent containers tightly closed when not in use.

   vi. Compliance with all of the terms and conditions of this permit.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the printing line:

   a. The name and identification number of each ink employed.

   b. The number of gallons of each ink, employed.

   c. The OC content of each ink, in lbs/gal.

   d. The total OC emission rate from all inks, in lbs/day, i.e., d = sum of [0.05(b x c)] for all inks.

   e. The name and identification number of each solvent (thinner, retarder, fountain solution, etc.), and photochemically reactive cleanup material (PRCM) employed.

   f. The number of gallons of each solvent, and PRCM employed.

   g. The OC content of each solvent, and PRCM, in lbs/gal.

h. The total OC emission rate from all solvents, and PRCM, in lbs/day, i.e., h = sum of [f x g] for all solvents and PRCM.

i. The total OC emission rate from all inks, solvents and PRCM, in lbs/day, i.e., i = sum of [d + h] for all inks, solvents, and PRCM.

j. The total number of hours the emissions unit was in operation.

k. The average hourly OC emission rate from all inks, solvents and PRCM, in lbs/hr (average), i.e., k = i/j

The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

[Note the following assumptions-- For lithographic printing operations: 5% emissions and 95% retention of OC from inks; 100% emissions of OC from solvents (e.g., thinners); 100% emissions of OC from fountain solutions. For silk screen printing operations: 100% emissions of OC from inks and solvents (e.g., retarders). For cleanup: 100% emissions of OC from PRCM.]

2. The permit to install for this emissions unit (K001) 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for 2-Butoxyethanol:

Pollutant: (CAS 111-76-2)

TLV (mg/m3): 96,600

Maximum Hourly Emission Rate (lbs/hr): 1.21

Predicted 1-Hour MAGLC (ug/m3): 643

MAGLC (ug/m3): 2300

3. Physical changes to or changes 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 Toxic 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 still 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 applying 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still 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. where 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 deviation (excursion) reports which include the following information:

a. An identification of each day during which the average hourly OC emissions from the inks, solvents, and PRCM exceeded 8 lbs/hr, and the actual average hourly OC emissions for each such day.

b. An identification of each day during which the OC emissions from the inks, solvents, and PRCM exceeded 40 lbs/day, and the actual OC emissions for each such day.

2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

3. The permittee shall also submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. **Testing Requirements**

1. Compliance with the hourly and daily OC emission limits for this emissions unit shall be based upon the record keeping requirements contained in the Monitoring and/or Recordkeeping Requirements section of this permit.

2. Formulation data or USEPA Method 24/24A may be used to determine the OC contents of the coatings and cleanup materials.

   If required, compliance with the hourly mass emission limitations shall be demonstrated based upon the methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A.

F. **Miscellaneous Requirements**

1. None

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Facility ID: 1677130073 Emissions Unit ID: K002 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
sheetfed coldset lithographic printing line	OAC rule 3745-31-05 (PTI 16-1867)	7.3 TPY of organic compounds (OC) See A.2.a below.
	OAC rule 3745-21-07(G)	8 lbs/hr OC 40 lbs/day OC

2. **Additional Terms and Conditions**

   (a) Pursuant to the best available technology (BAT) requirements for new sources, as covered under Ohio Administrative Code (OAC) rule 3745-31-05, the permittee shall perform the following:

   i. Employment of coldset, ultra-violet (UV) cured inks for the lithographic printing presses.

   ii. Employment of natural gas as fuel for the common hot-air dryer for the silk screen printing presses.

   iii. Employment of low HAP content inks, cleanup materials, and all other solvents.

   iv. Hand wipe cleanup rags kept in sealed containers when not in use and/or for proper disposal.

   v. Cleanup solvent containers tightly closed when not in use.

   vi. Compliance with all of the terms and conditions of this permit.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the printing line:

   a. The name and identification number of each ink employed.

   b. The number of gallons of each ink, employed.

   c. The OC content of each ink, in lbs/gal.

   d. The total OC emission rate from all inks, in lbs/day, i.e., d = sum of [0.05(b x c)] for all inks.

   e. The name and identification number of each solvent (thinner, retarder, fountain solution, etc.), and photochemically reactive cleanup material (PRCM) employed.

f. The number of gallons of each solvent, and PRCM employed.

g. The OC content of each solvent, and PRCM, in lbs/gal.

h. The total OC emission rate from all solvents, and PRCM, in lbs/day, i.e., h = sum of [f x g] for all solvents and PRCM.

i. The total OC emission rate from all inks, solvents and PRCM, in lbs/day, i.e., i = sum of [d + h] for all inks, solvents, and PRCM.

j. The total number of hours the emissions unit was in operation.

k. The average hourly OC emission rate from all inks, solvents and PRCM, in lbs/hr (average), i.e., k = i/j

The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

[Note the following assumptions-- For lithographic printing operations: 5% emissions and 95% retention of OC from inks; 100% emissions of OC from solvents (e.g., thinners); 100% emissions of OC from fountain solutions. For silk screen printing operations: 100% emissions of OC from inks and solvents (e.g., retarders). For cleanup: 100% emissions of OC from PRCM.]

2. The permit to install for this emissions unit (K002) 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for 2-Butoxyethanol:

Pollutant: (CAS 111-76-2)

TLV (mg/m3): 96,600

Maximum Hourly Emission Rate (lbs/hr): 1.21

Predicted 1-Hour MAGLC (ug/m3): 643

MAGLC (ug/m3): 2300

3. Physical changes to or changes 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 Toxic 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 still 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 applying 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still 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. where 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 deviation (excursion) reports which include the following information:

a. An identification of each day during which the average hourly OC emissions from the inks, solvents, and PRCM exceeded 8 lbs/hr, and the actual average hourly OC emissions for each such day.

b. An identification of each day during which the OC emissions from the inks, solvents, and PRCM exceeded 40 lbs/day, and the actual OC emissions for each such day.

2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term

and Condition 3 of this permit.

3. The permittee shall also submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. **Testing Requirements**

1. Compliance with the hourly and daily organic compound emission limits for this emissions unit shall be based upon the record keeping requirements contained in the Monitoring and/or Recordkeeping Requirements section of this permit.

2. Formulation data or USEPA Method 24/24A may be used to determine the OC contents of the coatings and cleanup materials.

   If required, compliance with the hourly mass emission limitations shall be demonstrated based upon the methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A.

F. **Miscellaneous Requirements**

1. None

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Facility ID: 1677130073 Emissions Unit ID: K004 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
sheetfed coldset lithographic printing line	OAC rule 3745-31-05 (PTI 16-1867)	7.3 TPY of organic compounds (OC) See A.2.a below.
	OAC rule 3745-21-07(G)	8 lbs/hr of OC 40 lbs/day of OC

2. **Additional Terms and Conditions**

   (a) Pursuant to the best available technology (BAT) requirements for new sources, as covered under Ohio Administrative Code (OAC) rule 3745-31-05, the permittee shall perform the following:

   i. Employment of coldset, ultra-violet (UV) cured inks for the lithographic printing presses.

   ii. Employment of natural gas as fuel for the common hot-air dryer for the silk screen printing presses.

   iii. Employment of low HAP content inks, cleanup materials, and all other solvents.

   iv. Hand wipe cleanup rags kept in sealed containers when not in use and/or for proper disposal.

   v. Cleanup solvent containers tightly closed when not in use.

   vi. Compliance with all of the terms and conditions of this permit.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the printing line:

   a. The name and identification number of each ink employed.

   b. The number of gallons of each ink, employed.

c. The OC content of each ink, in lbs/gal.

d. The total OC emission rate from all inks, in lbs/day, i.e., d = sum of [0.05(b x c)] for all inks.

e. The name and identification number of each solvent (thinner, retarder, fountain solution, etc.), and photochemically reactive cleanup material (PRCM) employed.

f. The number of gallons of each solvent, and PRCM employed.

g. The OC content of each solvent, and PRCM, in lbs/gal.

h. The total OC emission rate from all solvents, and PRCM, in lbs/day, i.e., h = sum of [f x g] for all solvents and PRCM.

i. The total OC emission rate from all inks, solvents and PRCM, in lbs/day, i.e., i = sum of [d + h] for all inks, solvents, and PRCM.

j. The total number of hours the emissions unit was in operation.

k. The average hourly OC emission rate from all inks, solvents and PRCM, in lbs/hr (average), i.e., k = i/j

The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

[Note the following assumptions-- For lithographic printing operations: 5% emissions and 95% retention of OC from inks; 100% emissions of OC from solvents (e.g., thinners); 100% emissions of OC from fountain solutions. For silk screen printing operations: 100% emissions of OC from inks and solvents (e.g., retarders). For cleanup: 100% emissions of OC from PRCM.]

2. The permit to install for this emissions unit (K004) 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for 2-Butoxyethanol:

Pollutant: (CAS 111-76-2)

TLV (mg/m3): 96,600

Maximum Hourly Emission Rate (lbs/hr): 1.21

Predicted 1-Hour MAGLC (ug/m3): 643

MAGLC (ug/m3): 2300

3. Physical changes to or changes 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 Toxic 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 still 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 applying 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still 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. where 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 deviation (excursion) reports which include the following information:

a. An identification of each day during which the average hourly OC emissions from the inks, solvents, and PRCM exceeded 8 lbs/hr, and the actual average hourly OC emissions for each such day.

b. An identification of each day during which the OC emissions from the inks, solvents, and PRCM exceeded 40 lbs/day, and the actual OC emissions for each such day.

2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

3. The permittee shall also submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. **Testing Requirements**

1. Compliance with the hourly and daily organic compound emission limits for this emissions unit shall be based upon the record keeping requirements contained in the Monitoring and/or Recordkeeping Requirements section of this permit.

2. Formulation data or USEPA Method 24/24A may be used to determine the OC contents of the coatings and cleanup materials.

If required, compliance with the hourly mass emission limitations shall be demonstrated based upon the methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A.

F. **Miscellaneous Requirements**

1. None

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Facility ID: 1677130073 Emissions Unit ID: R001 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
silk screen printing line with hot-air dryer	OAC rule 3745-31-05 (PTI 16-1867)	7.3 TPY of organic compounds (OC) See A.2.a below.
	OAC rule 3745-21-07(G)	8 lbs/hr OC 40 lbs/day OC

2. **Additional Terms and Conditions**

(a) Pursuant to the best available technology (BAT) requirements for new sources, as covered under Ohio Administrative Code (OAC) rule 3745-31-05, the permittee shall perform the following:

i. Employment of coldset, ultra-violet (UV) cured inks for the lithographic printing presses.

ii. Employment of natural gas as fuel for the common hot-air dryer for the silk screen printing presses.

iii. Employment of low HAP content inks, cleanup materials, and all other solvents.

iv. Hand wipe cleanup rags kept in sealed containers when not in use and/or for proper disposal.

v. Cleanup solvent containers tightly closed when not in use.

vi. Compliance with all of the terms and conditions of this permit.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the printing line:

a. The name and identification number of each ink employed.

b. The number of gallons of each ink, employed.

c. The OC content of each ink, in lbs/gal.

d. The total OC emission rate from all inks, in lbs/day, i.e., d = sum of [0.05(b x c)] for all inks.

e. The name and identification number of each solvent (thinner, retarder, fountain solution, etc.), and photochemically reactive cleanup material (PRCM) employed.

f. The number of gallons of each solvent, and PRCM employed.

g. The OC content of each solvent, and PRCM, in lbs/gal.

h. The total OC emission rate from all solvents, and PRCM, in lbs/day, i.e., h = sum of [f x g] for all solvents and PRCM.

i. The total OC emission rate from all inks, solvents and PRCM, in lbs/day, i.e., i = sum of [d + h] for all inks, solvents, and PRCM.

j. The total number of hours the emissions unit was in operation.

k. The average hourly OC emission rate from all inks, solvents and PRCM, in lbs/hr (average), i.e., k = i/j

The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

[Note the following assumptions-- For lithographic printing operations: 5% emissions and 95% retention of OC from inks; 100% emissions of OC from solvents (e.g., thinners); 100% emissions of OC from fountain solutions. For silk screen printing operations: 100% emissions of OC from inks and solvents (e.g., retarders). For cleanup: 100% emissions of OC from PRCM.]

2. The permit to install for this emissions unit (R001) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for 2-Butoxyethanol:

Pollutant: (CAS 111-76-2)

TLV (mg/m3): 96,600

Maximum Hourly Emission Rate (lbs/hr): 1.21

Predicted 1-Hour MAGLC (ug/m3): 643

MAGLC (ug/m3): 2300

3. Physical changes to or changes 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 Toxic 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 still 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 applying 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still 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. where 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 deviation (excursion) reports which include the following information:

   a. An identification of each day during which the average hourly organic compound emissions from the inks, solvents, and PRCM exceeded 8 pounds per hour, and the actual average hourly organic compound emissions for each such day.

   b. An identification of each day during which the organic compound emissions from the inks, solvents, and PRCM exceeded 40 pounds per day, and the actual organic compound emissions for each such day.

2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 3 of this permit.

3. The permittee shall also submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

E. **Testing Requirements**

1. Compliance with the hourly and daily organic compound emission limits for this emissions unit shall be based upon the record keeping requirements contained in the Monitoring and/or Recordkeeping Requirements section of this permit.

2. Formulation data or USEPA Method 24/24A may be used to determine the OC contents of the coatings and cleanup materials.

   If required, compliance with the hourly mass emission limitations shall be demonstrated based upon the methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A.

F. **Miscellaneous Requirements**

1. None

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

Facility ID: 1677130073 Emissions Unit ID: R002 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
silk screen printing line with hot-air dryer	OAC rule 3745-31-05 (PTI 16-1867)	7.3 TPY of organic compounds (OC) See A.2.a below.
	OAC rule 3745-21-07(G)	8 lbs/hr of OC 40 lbs/day of OC

2. **Additional Terms and Conditions**

   (a) Pursuant to the best available technology (BAT) requirements for new sources, as covered under Ohio Administrative Code (OAC) rule 3745-31-05, the permittee shall perform the following:

   i. Employment of coldset, ultra-violet (UV) cured inks for the lithographic printing presses.

   ii. Employment of natural gas as fuel for the common hot-air dryer for the silk screen printing presses.

   iii. Employment of low HAP content inks, cleanup materials, and all other solvents.

iv. Hand wipe cleanup rags kept in sealed containers when not in use and/or for proper disposal.

v. Cleanup solvent containers tightly closed when not in use.

vi. Compliance with all of the terms and conditions of this permit.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the printing line:

a. The name and identification number of each ink employed.

b. The number of gallons of each ink, employed.

c. The OC content of each ink, in lbs/gal.

d. The total OC emission rate from all inks, in lbs/day, i.e., d = sum of [0.05(b x c)] for all inks.

e. The name and identification number of each solvent (thinner, retarder, fountain solution, etc.), and photochemically reactive cleanup material (PRCM) employed.

f. The number of gallons of each solvent, and PRCM employed.

g. The OC content of each solvent, and PRCM, in lbs/gal.

h. The total OC emission rate from all solvents, and PRCM, in lbs/day, i.e., h = sum of [f x g] for all solvents and PRCM.

i. The total OC emission rate from all inks, solvents and PRCM, in lbs/day, i.e., i = sum of [d + h] for all inks, solvents, and PRCM.

j. The total number of hours the emissions unit was in operation.

k. The average hourly OC emission rate from all inks, solvents and PRCM, in lbs/hr (average), i.e., k = i/j

The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

[Note the following assumptions-- For lithographic printing operations: 5% emissions and 95% retention of OC from inks; 100% emissions of OC from solvents (e.g., thinners); 100% emissions of OC from fountain solutions. For silk screen printing operations: 100% emissions of OC from inks and solvents (e.g., retarders). For cleanup: 100% emissions of OC from PRCM.]

2. The permit to install for this emissions unit (R002) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for 2-Butoxyethanol:

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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.).

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to install prior to the change.

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2. Formulation data or USEPA Method 24/24A may be used to determine the OC contents of the coatings and cleanup materials.

   If required, compliance with the hourly mass emission limitations shall be demonstrated based upon the methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A.

F. **Miscellaneous Requirements**

1. None