

Facility ID: 1431070992 Issuance type: Final State Permit To Operate

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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.

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

Facility ID: 1431070992 Emissions Unit ID: R010 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>
non-heatset sheet-fed offset press with infrared dryer - Mitsubishi Sheet Fed	OAC rule 3745-31-05(A)(3) (PTI 14-4841)	330.82 lbs/day of organic compound (OC) emissions* 10.60 tons per year (TPY) of OC emissions* 10.60 TPY of OC emissions, based upon a rolling, 12-month summation* * includes OC emissions from inks, fountain solutions, aqueous coatings and blanket wash materials See Sections A.2.a, A.2.b, A.2.c, A.2.d, A.2.e, A.2.f and B.2 below.
	OAC rule 3745-21-07(G)(2)	See Section B.1 below.

2. Additional Terms and Conditions

- (a) The total allowable usage* of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The maximum OC content of each ink, fountain solution, aqueous coating and blanket wash material, as applied, shall not exceed the following:

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

The maximum annual ink usage for this emissions unit shall not exceed 40,000 pounds per year, based upon a rolling, 12-month summation of the ink usage figures.
 The maximum annual fountain solution usage for this emissions unit shall not exceed 20,000 gallons per year, based upon a rolling, 12-month summation of the fountain solution usage figures.
 The maximum annual aqueous coating usage for this emissions unit shall not exceed 8,000 gallons per year, based upon a rolling, 12-month summation of the aqueous coating usage figures.
 The maximum annual blanket wash material usage for this emissions unit shall not exceed 1,000 gallons per year, based upon a rolling, 12-month summation of the blanket wash material usage figures.

The daily OC emission limitation represents the emissions unit's potential to emit from inks, fountain solutions and aqueous coatings employed in a 24-hour period, plus OC emissions from blanket wash materials (cleanup materials) with an operational restriction of 10 gallons/day. Therefore, no daily records are required to demonstrate compliance with this limit and compliance is ensured with the daily OC emission limitation if compliance is maintained with the blanket wash operational restriction.

B. Operational Restrictions

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

Prior to employing any photochemically reactive material in this emissions unit, including any blanket wash material that is a photochemically reactive material, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to

determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.

2. The maximum daily blanket wash material usage for this emissions unit shall not exceed 10 gallons per day.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each day for blanket wash material employed in this emissions unit:

- a. the company identification (including product name per Material Safety Data Sheet) for each blanket wash material employed;
- b. documentation on whether or not each blanket wash material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5);
- c. the number of gallons of each blanket wash material employed;
- d. the total number of gallons of all blanket wash materials employed; and
- e. the OC content, in lbs/gallon, of each blanket wash material, as applied.

2. The permittee shall collect and record the following information each month for each material employed in this emissions unit:

- a. the company identification for each ink, fountain solution and aqueous coating employed;
- b. a record of each ink, fountain solution, and aqueous coating employed in this emissions unit indicating whether or not the ink, fountain solution or aqueous coating is a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5);
- c. the total number of gallons of all blanket wash material employed (summation of C.1.d for each day of the calendar month);
- d. the amount, in pounds, of each ink employed;
- e. the amount, in gallons, of each fountain solution employed;
- f. the amount, in gallons, of each aqueous coating employed;
- g. the OC content of each ink, as applied, in percent by weight;
- h. the OC content of each fountain solution, as applied, in lbs/gallon;
- i. the OC content of each aqueous coating, as applied, in lbs/gallon;
- j. the updated rolling, 12-month summation of all inks employed, in pounds;
- k. the updated rolling, 12-month summation of all fountain solutions employed, in gallons;
- l. the updated rolling, 12-month summation of all aqueous coatings employed, in gallons;
- m. the updated rolling, 12-month summation of all blanket wash materials employed, in gallons;
- n. the total OC emissions for the calendar month, in tons [summation of $(d \times (g/100\%) \times 0.05)^*$ for all inks, plus the summation of $(e \times h)$ for all fountain solutions, plus the summation of $(f \times i)$ for all aqueous coatings, plus the summation of $(C.1.c \times C.1.e)$ for all blanket wash materials employed (and divided by 2,000 lbs/ton)]; and
- o. the updated rolling, 12-month summation of the total OC emissions, in tons.

* The calculation uses an estimate of 95% retention by weight of OC in the web for the inks employed.

3. The permittee shall maintain annual records of the total OC emissions, in tons, for the calendar year (summation of C.2.n for each month of the calendar year).

4. The permittee shall collect and record the following information each month for the entire facility:

- a. the name and identification number of all inks, fountain solutions and aqueous coatings employed;
- b. the individual HAP content for each HAP of each ink, each fountain solution and each aqueous coating, in pounds of individual HAP per pound of ink (or per gallon of fountain solution and aqueous coating), as applied;
- c. the total combined HAP content of each ink, each fountain solution and each aqueous coating, in pounds of combined HAPs per pound of ink (or per gallon of fountain solution and aqueous coating), as applied [sum all the individual HAP contents from (b)];
- d. the number of pounds of each ink, and gallons of each fountain solution and each aqueous coating employed;
- e. the name and identification of each blanket wash material employed;
- f. the individual HAP content for each HAP of each blanket wash material, in pounds of individual HAP per gallon of blanket wash material, as applied;
- g. the total combined HAP content of each blanket wash material, in pounds of combined HAPs per gallon of blanket wash material, as applied [sum all the individual HAP contents from (f)];

h. the number of gallons of each blanket wash material employed;

i. the total individual HAP usage for each HAP from all inks, fountain solutions, aqueous coatings and blanket wash materials employed, in pounds or tons per month [for each HAP the sum of (b) x (d) x 0.05* for each ink, plus the sum of (b) x (d) for each fountain solution, plus the sum of (b) x (d) for each aqueous coating, plus the sum of (f) x (h) for each blanket wash material (and divided by 2,000 lbs/ton if the units are in tons)];

j. the total combined HAP usage from all inks, fountain solutions, aqueous coatings and blanket wash materials employed, in pounds or tons per month [the sum of (c) x (d) x 0.05* for each ink, plus the sum of (c) x (d) for each fountain solution, plus the sum of (c) x (d) for each aqueous coating, plus the sum of (g) x (h) for each blanket wash material (and divided by 2,000 lbs/ton if the units are in tons)];

k. the updated rolling, 12-month summation of usage for each individual HAP emissions, in tons (this shall include the information for the current month and the preceding eleven calendar months); and

l. the updated rolling, 12-month summation of usage for total combined HAP emissions, in 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.

* The calculation uses an estimate of 95% retention by weight of OC in the web for the inks employed.

5. The permit to install for this emissions unit was evaluated based on the actual materials employed (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. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic 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 the "worst case" pollutants:

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

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

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

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

a. changes in the composition of the materials used, 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 Toxics Policy" will be satisfied with the above changes, 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 satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

D. **Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing, identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 30 days after the occurrence.
2. The permittee shall submit annual reports that specify the total OC emissions, and the individual and combined HAP emissions, in tons, from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calendar year.
3. The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. Any exceedance of the blanket wash material usage limitation (i.e., 10 gallons per day of blanket wash materials);
 - b. All exceedances of the OC content limitations for inks, fountain solutions, aqueous coatings and blanket wash materials;
 - c. An identification of all exceedances of the rolling, 12-month usage limitations for all materials employed in this emissions unit (i.e., inks, fountain solutions, aqueous coatings and blanket wash materials);
 - d. An identification of all exceedances of the rolling, 12-month OC emission limitation; and
 - e. An identification of all exceedances of the rolling, 12-month HAP emission limitations of 9.9 tons and 24.9 tons for any single HAP and combination of HAPs, respectively.
4. 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 OC emission limitations, HAP emission limitations, OC content restrictions and the material usage restrictions shall be determined by the following methods:
OC Emission Limitation: 330.82 lbs/day of OC emissions

Applicable Compliance Method: The daily OC emission limitation represents the emissions unit's potential to emit for inks, fountain solutions and aqueous coatings and was based on the maximum daily usage rates [192 gallons/day (1,920 lbs/day) for inks, 57.6 gallons/day for fountain solutions and 168 gallons/day for aqueous coatings], web retention factor and maximum OC contents of the materials employed, and an operational restriction of 10 gallons/day for blanket wash materials.

Compliance with the daily OC emission limitation shall be determined as follows:

Maximum OC Emissions (lbs/day) = [maximum pounds (or maximum gallons) of ink employed/day x maximum OC content of ink, in weight percent (or lbs/gallon) x 0.05 (5% of the OC is emitted as fugitive emissions)] + [maximum gallons of fountain solution employed/day x maximum OC content of the fountain solution (lbs/gallon)] + [maximum gallons of aqueous coating employed/day x maximum OC content of the aqueous coating (lbs/gallon)] + [maximum gallons of blanket wash material employed/day x maximum OC content of the blanket wash material (lbs/gallon)].

In addition, compliance with the daily OC emission limitation is ensured if compliance is maintained with the daily operational restriction (10 gallons/day) for the blanket wash materials.
OC Emission Limitation: 10.60 TPY of OC emissions

Applicable Compliance Method: Compliance with the annual OC emission limitation shall be determined by the record keeping requirements specified in Section C.3.
OC Emission Limitation: 10.60 TPY of OC emissions, based upon a rolling, 12-month summation

Applicable Compliance Method: Compliance with the annual OC emission limitation shall be determined by the record keeping requirements specified in Section C.2.
HAP Emission Limitations: HAP emissions of 9.9 TPY or less for any single HAP and 24.9 TPY or less for any combination of HAPs

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements specified in Section C.4.
OC Content Restrictions:

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

Applicable Compliance Method: Compliance with the OC content restrictions shall be determined by the record keeping specified in Sections C.1 and C.2. Formulation data or U.S. EPA Method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the inks, aqueous coatings and fountain solutions. Formulation data shall be used to determine the OC content of the blanket wash materials.
Material Usage Restrictions: ink usage not to exceed 40,000 pounds per year, based upon a rolling, 12-month summation; fountain solution usage not to exceed 20,000 gallons per year, based upon a rolling, 12-month summation; aqueous coating usage not to exceed 8,000 gallons per year, based upon a rolling, 12-month summation; blanket wash material usage not to exceed 1,000 gallons per year, based upon a rolling, 12-month summation

Applicable Compliance Method: Compliance with the material usage rate restrictions shall be determined by the record keeping specified in Section C.2.

F. Miscellaneous Requirements

1. None