

Facility ID: 1431330487 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: 1431330487 Emissions Unit ID: R008 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>
heatsheet web offset lithographic printing press #470A w/thermal incinerator	OAC rule 3745-31-05(A)(3) (PTI 14-03771)	232.9 lbs of organic compound (OC) emissions/day* The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-05(D) and 3745-21-07(G)(2).
	OAC rule 3745-31-05(D) (PTI 14-03771)	* The daily OC emission limitation specified above is based upon the emissions unit's potential to emit. Therefore, no daily records are required to demonstrate compliance with this emission limit. 17.7 tons per year (TPY) of OC emissions, based upon a rolling, 12-month summation
	OAC rule 3745-21-07(G)(2)	See Section A.2 below. Exempt, see Section B.1 below.

2. Additional Terms and Conditions

- (a) The permittee shall maintain and operate a thermal incinerator capable of maintaining an OC emission control efficiency of at least 90%, by weight.
The actual emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act and based upon material usage, 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 following OC retention and OC allocation factors have been defined for inks, fountain solutions and cleanup materials employed in this emissions unit:
 - i. Inks: 20%, by weight, retention of OC in the web; 80%, by weight, OC emitted in the dryer.
 - ii. Fountain Solutions: 70%, by weight, of OC emitted in the dryer; 30%, by weight, OC emitted as fugitive emissions.
 - iii. Cleanup Materials: 40%, by weight, OC emitted emitted in the dryer; 60%, by weight, OC emitted as fugitive emissions.

B. Operational Restrictions

1. This emissions unit is exempt from the requirements of OAC rule 3745-21-07(G)(2) because the materials employed by this emissions unit do not contain any photochemically reactive material as defined in OAC rule 3745-21-01(C)(5). The use of any photochemically reactive material in this emissions unit is prohibited.
2. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1,225 degrees Fahrenheit.
3. The maximum annual ink usage rate shall not exceed 45,000 gallons per year, based upon a rolling, 12-month summation.
4. The maximum annual fountain solution usage rate shall not exceed 2,955 gallons per year, based upon a rolling,

12-month summation.

5. The maximum annual cleanup material usage rate shall not exceed 3,500 gallons per year, based upon a rolling, 12-month summation.

C. Monitoring and/or Record Keeping Requirements

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

The permittee shall collect and record the following information for each day:

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,225 degrees Fahrenheit.
- b. A log of the downtimes for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

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

- a. the company identification of each liquid organic material employed in this emissions unit; and
- b. a record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).

3. The permittee shall collect and record the following information each month for this emissions unit:

- a. the name and identification number of each ink, fountain solution and cleanup material employed;
- b. the OC content of each ink employed, in pounds per gallon;
- c. the OC content of each fountain solution employed, in pounds per gallon;
- d. the OC content of each cleanup material employed, in pounds per gallon;
- e. the number of gallons of each ink employed;
- f. the number of gallons of each fountain solution employed;
- g. the number of gallons of each cleanup material employed;
- h. the total combined OC emissions from all inks, fountain solutions and cleanup materials employed, in tons [the summation of $[b \times e \times 0.8 \times (1 - \text{the fractional control efficiency of the thermal incinerator } (0.9))]$ for all inks employed, plus the summation of $[c \times f \times 0.7 \times (1 - \text{the fractional control efficiency of the thermal incinerator } (0.9))]$ for all fountain solutions employed (dryer emissions), plus the summation of $[c \times f \times 0.3]$ for all fountain solutions employed (fugitive emissions), plus the summation of $[d \times g \times 0.4 \times (1 - \text{the fractional control efficiency of the thermal incinerator } (0.9))]$ for all cleanup materials employed (dryer emissions), plus the summation of $[d \times g \times 0.6]$ for all cleanup materials employed (fugitive emissions), and divided by 2,000 lbs/ton];
- i. the total number of gallons of all inks employed;
- j. the total number of gallons of all fountain solutions employed;
- k. the total number of gallons of all cleanup materials employed;
- l. the updated rolling, 12-month summations of the total usage figures for all inks, fountain solutions and cleanup materials employed, in gallons; and
- m. the updated rolling, 12-month summation of the total combined OC emissions from all inks, fountain solutions, and cleanup materials employed, in tons.

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

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

- in pounds or tons per month [for each HAP, the sum of (b) x (d) x 0.8 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each ink, plus the sum of (b) x (d) x 0.7 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each fountain solution (dryer emissions), plus the sum of (b) x (d) x 0.3 for each fountain solution (fugitive emissions), plus the sum of (f) x (h) x 0.4 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each cleanup material (dryer emissions), plus the sum of (f) x (h) x 0.6 for each cleanup material (fugitive emissions), and divided by 2,000 lbs/ton if the units are in tons];
- j. the total combined HAP usage from all inks, fountain solutions and cleanup materials employed, in pounds or tons per month [for each HAP, the sum of (c) x (d) x 0.8 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each ink, plus the sum of (c) x (d) x 0.7 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each fountain solution (dryer emissions), plus the sum of (c) x (d) x 0.3 for each fountain solution (fugitive emissions), plus the sum of (g) x (h) x 0.4 x (1 - the fractional control efficiency of the thermal incinerator (0.9)) for each cleanup material (dryer emissions), plus the sum of (g) x (h) x 0.6 for each cleanup material (fugitive emissions), 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 an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. 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 and cleanup materials).
 - b. An identification of all exceedances of the rolling, 12-month OC emission limitation.
 - c. 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.
 - d. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified in Section B.2.
2. All quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
3. 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 45 days after the occurrence.
4. The permittee shall submit annual reports that summarize the annual HAP emissions for each HAP and for combined HAPs for each calendar year. The reports shall be submitted by January 31 of each year.

E. Testing Requirements

1. Compliance with the OC emission limitation specified in Section A.1, the thermal incinerator control efficiency requirement and the HAP emission limitations specified in Section A.2, and the annual ink, fountain solution and cleanup material usage restrictions specified in Section B shall be determined by the following methods:

OC Emission Limitation: 232.9 lbs of OC emissions/day

Applicable Compliance Method: The daily OC emission limitation represents the emissions unit's potential to emit and is based on the maximum daily usage rates (in gallons) of inks, fountain solutions and cleanup materials to be employed and multiplied by each constituent's maximum OC content (in lbs/gallon). In addition, the potential to emit accounts for the OC retention and OC allocation factors for the inks, fountain solutions and cleanup materials employed and a 90% OC emission control efficiency.

OC Emission Limitation: 17.7 TPY of OC emissions, based upon a rolling, 12-month summation

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

HAP Emission Limitations: 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs

Applicable Compliance Method: Compliance with the HAP emission limitations shall be based upon the record keeping requirements specified in Section C.4.

Material Usage Restrictions: 45,000 gallons per year of inks, based upon a rolling, 12-month summation; 2,955 gallons per year of fountain solutions, based upon a rolling, 12-month summation; 3,500 gallons per year of cleanup materials, based upon a rolling, 12-month summation

Applicable Compliance Method: Compliance with the material usage restrictions shall be based upon the record keeping requirements specified in Section C.3.

Control Efficiency Limitation: thermal incinerator with a minimum OC emission control efficiency of 90%, by weight

Applicable Compliance Method: Compliance with the OC emission control efficiency shall be determined by emission testing using the methods identified in Section E.3.
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, fountain solutions, and cleanup materials.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the

following requirements:

- a. The emission testing shall be conducted within six months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the control efficiency (i.e., destruction efficiency) limitation for OC emissions.
- c. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- d. The tests shall be conducted while emissions units R004 and R008 are operating at or near their maximum capacities, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time (s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Hamilton County Department of Environmental Services' refusal to accept the results of the emission tests.
- f. Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

F. Miscellaneous Requirements

1. None