

Facility ID: 1677010069 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: 1677010069 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
heatset web offset printing line (5-unit press) with a natural gas-fired drying oven controlled by a natural gas-fired catalytic incinerator.	OAC rule 3745-31-05 (PTI 16-719)	0.406 pound of volatile organic compounds (VOC) per hour or 90% destruction efficiency, by weight, for VOC.
		See A.2.a below.
		See B.1 through B.4 below.
	OAC rule 3745-21-07	See B.5 below.

**2. Additional Terms and Conditions**

- (a) The permittee shall employ a properly installed, operated, and maintained a catalytic incinerator, in accordance with the manufacturer's recommendations, instructions, and operating manual(s), to adequately control VOC emissions from K001.
 

The permittee shall employ properly installed, operated, and maintained ducts, fans, and other equipment, in accordance with the manufacturer's recommendations, instructions, and operating manual(s), to adequately enclose, contain, capture, and vent VOC emissions from K001 to the catalytic incinerator.

**B. Operational Restrictions**

1. The permittee shall not employ more than 4400 gallons of cleanup material, on an annual basis, in this emissions unit.
2. The maximum VOC content of any of the cleanup materials employed in this emissions unit shall not exceed 6.7 pounds per gallon.
3. The catalytic incinerator shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The conversion efficiency of the catalyst, as determined in an annual catalyst activity test, shall be at least 90% at a test temperature that is equal to that temperature at which the inlet to the catalyst bed is set. Solvent loading during the catalyst activity test shall be consistent with the test laboratory's normal testing protocol.
4. All of the VOC emissions from this emissions unit shall be vented to the catalytic incinerator when the emissions unit is in operation.
5. The permittee shall not employ any liquid organic material in this emissions unit that is considered a photochemically reactive material. "Photochemically reactive material" is defined in OAC rule 3745-21-01(C)(5).

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

1. The permittee shall maintain records of the following information for this emissions unit:
  - a. the identification of each liquid organic material employed; and
  - b. documentation as to whether or not each liquid organic material employed is a photochemically reactive material, as defined by OAC rule 3745-21-01(C)(5).
2. The permittee shall collect and record the following information monthly for this emissions unit:

- a. the company identification for each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the total number of gallons of all cleanup materials employed (i.e., sum of (b)); and
  - d. the VOC content of each cleanup material, in pounds per gallon.
3. The permittee shall perform a preventative maintenance inspection of the catalytic incinerator on an annual basis to evaluate the performance of the catalyst bed. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, and shall include a physical inspection of the unit and all of the associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment and the catalyst shall be performed as determined by the inspection. During each annual inspection a sample of the catalyst material shall be collected from the catalyst bed and used to perform a catalyst activity test. The permittee shall maintain a record of the results of each annual inspection and the results of each annual catalyst activity test.

The permittee shall also perform weekly inspections of the external integrity of the catalytic incinerator. Records shall be maintained of the weekly inspections and the date(s) of catalyst replacement; and if only partial, the amount or percent of the total catalyst replaced.

4. The permittee shall install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit is in operation. The permittee shall also install, operate, and maintain a continuous temperature monitor that measures the catalyst bed temperature 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 monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
- a. all 3-hour blocks of time, when the emissions unit controlled by the catalytic incinerator was in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was less than 660 degrees Fahrenheit or was more than 50 degrees Fahrenheit below the average temperature measured during the most recent emissions test that demonstrated the emissions unit(s) was/were in compliance; and
  - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.
5. Whenever the monitored value for the catalyst bed temperature and/or the monitored value for the average temperature of the exhaust gases immediately before the catalyst bed deviated from the values specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
  - b. the magnitude of the deviation at that time;
  - c. the date(s) the investigation was conducted;
  - d. the names of the personnel who conducted the investigation; and
  - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date it was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation
- j. the catalyst bed temperature immediately after the corrective action, and
- k. the names of the personnel who performed the work.

Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The catalyst bed temperature shall not be less than 700 degree Fahrenheit, when the emissions unit is in operation.

The acceptable average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time the emissions unit(s) controlled by the catalytic incinerator is/are in operation, shall not be less than 660 degrees Fahrenheit or shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent emissions test that demonstrated the emissions unit(s) was/were in compliance.

The temperature values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature values based upon information obtained during future emission tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit. In addition, approved revisions to the temperature values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall record the catalyst bed temperature on a daily basis.
- D. **Reporting Requirements**
1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the

control equipment during the operation of this emissions unit:

- a. all periods of time during which the temperature of the catalyst bed did not meet the temperature limitation specified above and/or each period of time when the average temperature of the exhaust gases immediately before the catalyst bed was outside of the acceptable value;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the catalyst bed temperature into compliance with the acceptable value, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.
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 notify the Director (the ARAQMD) in writing if a photochemically reactive material (as defined in OAC rule 3745-21-01(C)(5)) was employed in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the ARAQMD) within 45 days after such an occurrence.
  4. The permittee shall submit annual reports on the results of the catalyst activity tests and a summary of the results of the annual inspection of the internal integrity of the catalytic incinerator. These reports shall be submitted within 45 days after the annual catalyst activity test is performed.
  5. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the VOC emissions were not vented to the catalytic incinerator. Each report shall be submitted within 30 days after the deviation occurs.
  6. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any monthly record showing the use of noncomplying cleanup material. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.
  7. The permittee shall also submit annual reports which specify the amount of cleanup materials (in gallons) employed in this emissions unit during the calendar year. These reports shall be submitted by January 31 of each year to the Director (District Office or local air agency).

**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:  
Emission Limitation:  
  
90% destruction efficiency, by weight, for VOC  
  
Applicable Compliance Method:  
  
The permittee shall demonstrate compliance with the destruction efficiency limitation above based upon the testing requirements of section E.3 below.  
Emission Limitation:  
  
0.406 pound of VOC per hour  
Applicable Compliance Method:  
  
If required, the permittee shall demonstrate compliance with the hourly allowable VOC emission limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A as required in section E.2 below.
2. The permittee shall conduct, or have conducted, emission testing for K001 in accordance with the following requirements:
  - a. If required, emissions testing shall be conducted (See section E.3 below).
  - b. The emissions testing shall be conducted to demonstrate compliance with the destruction efficiency limitation for VOC or the allowable mass emission rate for VOC.
  - c. The following test method shall be employed to demonstrate compliance with the destruction efficiency limitation for VOC or the allowable mass emission rate for VOC: Method 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A.
  - d. The tests shall be conducted while the emissions unit is operating at (or greater than) its normal capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
  - e. The destruction 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.  
Not later than 30 days prior to the proposed test date(s), this facility shall submit an "Intent to Test" notification. 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 Ohio EPA District Office's or Local Air Agency's refusal to accept the results of the emission tests.

Personnel from the appropriate Ohio EPA District Office or Local Air Agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information regarding the emissions unit operating parameters.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall conduct, or have conducted, catalyst activity testing using the catalyst sample collected during the annual inspection described in this permit. An intent to test notification shall not be required for catalyst activity testing. The procedures for the catalyst activity test shall be conducted in accordance with the manufacturer's recommendations and as required by the appropriate test method.

In the event that the catalyst activity testing indicates that the destruction efficiency would be below the limit in section B.3 then the permittee can opt to replace all or part of the catalyst, as recommended by the manufacturer, or conduct an emission test within 90 days of the catalyst activity test results to demonstrate compliance with the destruction efficiency limitation for VOC as specified in E.2 above.

F. **Miscellaneous Requirements**

1. None